# SOCIAL STIGMA AND AWARENESS ABOUT HEARING AIDS IN INDIA

**by**

**Aarti Gupta, MSc (Industrial Chemistry)**

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by

Aarti Gupta

Supervised by

Dr. Anna Provodnikova

APPROVED BY

Dissertation Chair - Dr. Gualdino Cardoso

RECEIVED/APPROVED BY:

Admission Director

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Submitted to the Research Committee at the
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## ABSTRACT

The study aims to examine hearing aid stigma and awareness in India. The main objective of the study is to focus on the causes of hearing aid stigma in India and find measures to promote the use of these devices. The study used mixed method to examine hearing aid perceptions, attitudes, and knowledge using qualitative interviews and questionnaires. Qualitative interviews reveal hearing-impaired people's lives, whereas surveys reveal society's views on Hearing aids. The sample of the study includes hearing-impaired people, healthcare experts, and the general population in order to collect varied perspectives. The findings of the study shows that Hearing aids are stigmatized in India, resulting in low knowledge and acceptance among hearing-impaired people. Reluctance to wear Hearing aids stems from misconceptions about old age and infirmity. However, hearing loss and hearing aid benefits for overall well-being are becoming more widely recognized. The study also highlights the requirement for targeted awareness initiatives and educational activities to reduce the stigma associated with Hearing aids and promote their adoption in India. These findings can help hearing aid companies sell Hearing aids positively and encourage hearing loss patients to utilize them. For people with hearing impairments in India, companies can make it easier for them to get Hearing aids and improve their quality of life by fighting social stigma and raising awareness.

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| Abbreviation | | Description |
|---|---|---|
| WHO | : | World Health Organization |
| ENTD | : | Ear, Nose, Throat Doctor |
| ABC model | : | Antecedents, Behavior, Consequences |
| NGO | : | Non-Governmental Organization |
| HADs | : | Hearing Assistive Devices (HADs) |
| NHIS | : | National Health Interview Survey |
| Cis | : | Cochlear Implants |
| PFS | : | Female Participant at Managerial grade |
| HATs | : | Hearing Assistive Technologies |

# CHAPTER I

# INTRODUCTION

## 1.1 Introduction to Hearing Aids

Speech development, which is vital for verbal communication and personality development, depends on an individual's ability to hear. One of the most common sensory deficiencies among people is hearing loss. One of the challenges faced by individuals with hearing impairments in the social sphere is the hindrance of communication during interactions and socialisation with the surroundings. The majority of people with hearing impairments find it challenging to communicate verbally. Individuals with hearing impairments experience many kinds of obstacles, including problems in comprehending linguistic symbols, such as names of objects, activities, and emotions (Gagné, Jennings and Southall, 2009, pp. 203-12). These challenges result from a lack of understanding of the rules and grammar of the standard language. Furthermore, many people without hearing impairments are not familiar with sign language. Additionally, written communication frequently fails to overcome these obstacles to communication. For those with hearing impairments, communication barriers have a big impact. The connected effects start with delayed language development in children with hearing impairments, which affects delayed speaking. This condition will also affect social development. Additionally, hearing-impaired persons will become antisocial, frequently distant, and limited to the deaf community as a result of losing their social skills. Optimizing the residual hearing of individuals with hearing impairments is an alternative that may be utilised to reduce obstacles to the communication process. The hearing impaired will probably understand more terminology and be better able to communicate and interact with others if they can hear and interpret more sounds. Wearing Hearing aids is one of the best strategies for improving hearing loss. Hearing aids need to be used as soon as possible, to mitigate the potential effects of hearing obstacles. Studies on the impact of Hearing aids constantly demonstrate that individuals who wear Hearing aids frequently encounter unfavorable comments from others. This phenomenon contributes to the stigmatization of Hearing aids. Moreover, this associated stigma has detrimental effects on the self-perception of individuals with hearing loss (Alsayed,

2021). To combat social stigma, there is a need to raise public knowledge about Hearing aids.

Prevention and early treatment of hearing loss and ear health depend on public awareness. To improve knowledge of Hearing aids, practitioners must launch coordinated and persistent campaigns to increase awareness at various levels. This includes effective advocacy of international organizations, governments, and legislators. Similarly, targeted campaigns are needed to raise awareness of the importance of Hearing aids among the general public and healthcare professionals. It is possible to bring about change at the local level by advocating at the highest levels. By increasing public knowledge, communities may foster an enlightened society—a social movement devoted to advancing ear and hearing health. Primary healthcare personnel must get regular training to improve their understanding of common ear and hearing problems, including their causes, prevention, identification, and management. Communities must, above all, be equipped with the knowledge of basic preventative measures that will guarantee their sustained or enhanced hearing health. The rising scope of the issue and its frequent causes, easy and efficient preventative techniques, the results of action, and the advantages of prompt intervention are all pertinent topics for increasing awareness.

It is essential to use a wide range of communication channels, such as in-person interactions, posters, print media, and digital media, to effectively communicate the significance of excellent ear and hearing health. The World Health Organization (WHO) may be the leader in gathering data and developing evidence-based tactics and resources to increase public knowledge of the advantages, means, and requirements of keeping optimal ear and hearing health. To successfully address the prevalence of deafness, especially in India, it is imperative to approach ear and hearing health as a social issue rather than simply a battle against the disease Deafness affects over 63 million individuals (6.3% of the population) in India, making it the second most frequent cause of disability. This group has substantial hearing loss. The rehabilitation of individuals with hearing impairment poses a formidable task. Collaboration and assistance from all parties engaged in the treatment of people with ear problems and hearing loss are crucial to meeting this challenge. This applies not

just to medical staff but also to the patients themselves (Sulabha, Mahendra and Akriti, 2013, p. 20). Through the adoption of a comprehensive strategy, the community may strive to raise awareness and put practical plans into action. In the Indian environment, there is a pressing desire to increase knowledge of Hearing aids. The government and other groups are actively involved in campaigns to raise awareness of Hearing aids and offer assistance to those who are deaf or hard of hearing. It is feasible to address the serious public health issue of hearing loss in India and enhance the chances of rehabilitation for individuals impacted by it by encouraging collaboration among stakeholders and making use of all available communication channels.

### 1.1.1 The social stigma of hearing aids

The definition of stigmatization is "the possession of or belief that one possesses, some attribute or characteristic that conveys a social identity that is devalued in a particular social context". Stigma is a powerful phenomenon that affects its targets in profound ways. Stigma has been linked to poor mental health, physical illness, poor academic performance, infant mortality, low social status, poverty, and limited access to resources such as housing and education (Hankins, 2015). The causes of bias, discrimination, and stereotyping have long piqued the curiosity of psychologists, but only recently have they focused intently on understanding the psychological effects of these phenomena.

The majority of developed nations stigmatize hearing loss. Individuals who suffer hearing loss are frequently the target of unfavorable preconceptions and biases, which negatively affect how they are perceived by others. It's common to think of those who have hearing loss as older, boring, and awkward conversation partners. Studies on the effect of Hearing aids have frequently demonstrated that those who are observed with Hearing aids receive a lower social status. But stigma also negatively affects how many individuals who have hearing loss view themselves. It is crucial to encourage greater societal awareness about the usage of Hearing aids in order to lessen the stigma attached to them.

### 1.1.2 Social awareness of Hearing aids

World Hearing Day is observed to raise awareness about the usage of Hearing aids. Every year, the world observes World Hearing Day as a platform for advocacy, encouraging action to solve challenges connected to hearing loss. It is observed on the 3rd of March to promote ear and hearing care at the local, state, and federal levels worldwide and to increase public awareness of hearing loss. Each year, this day focusses on a different subject. To reflect this, the World Health Organization (WHO) organizes events and collaborates with its partners to represent the particular issue that this day tackles. The key messages related to hearing aids are

- Communication and excellent hearing health are essential for connecting the world, communities, and each other at every stage of life.
- Appropriate and prompt therapies can help people with hearing loss have easier access to communication, work, and education.
- Globally, hearing loss interventions, such as hearing aids, are not accessible widely.
- It is important to provide early intervention through National health systems.

All nations, including India, are focusing on the promotion of hearing aids to encourage the use of these medical equipment for those with hearing impairments. India is going to concentrate on promoting the usage of hearing aids as well.

### 1.1.3 Social awareness of Hearing aids in India

In India, the government creates laws to encourage the use of Hearing aids and increase public awareness. In 2006, the National Program for Prevention and Control of Deafness was introduced by the Indian government, which is a promising initiative aimed at preventing hearing impairments. Through comprehensive training in ENT care services for primary healthcare workers, it aims to integrate health professionals working in the field of ear and hearing and deliver services to the community level by incorporating both government and commercial sectors. Since 2012, the Indian Public Health Standards have been reviewed and updated, providing further guidance and

support for the treatment of ear problems (Sarah, 2015). People with hearing impairments frequently feel alone in social situations because of their impairment. The following are some summaries of how hearing loss affects those who are hearing impaired.1.1.4 Impact of hearing loss on hearing disabled individuals

Studies reveal that a significant number of individuals with hearing loss experience a decline in self-worth and trust due to their compromised social communication skills. Learning to speak a new language can also be hampered by hearing loss (Hogan and Phillips, 2015). Reduced hearing, or hearing loss, can result from several different circumstances. It may be inherited or developed later in life. From modest hearing loss to extensive hearing loss, it might vary. There are three primary ways that hearing loss might impact an individual:

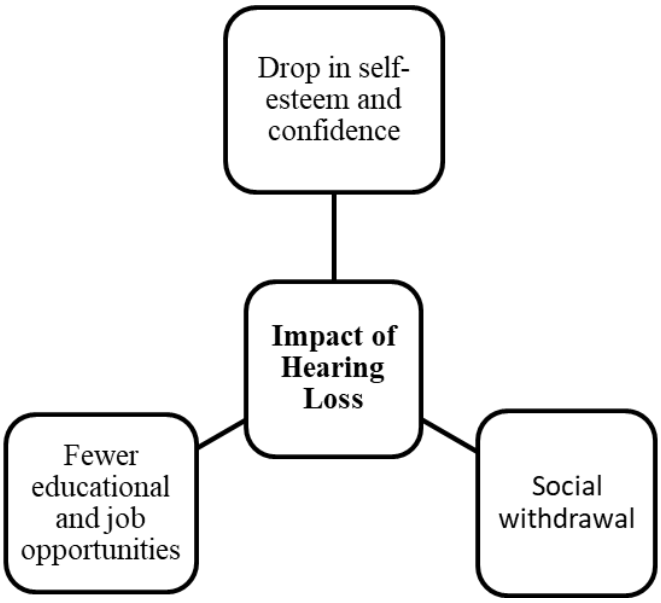



**Figure 1: Impact of hearing loss on hearing-disabled individual (Source: Michael et al, 2018)**

- Drop in self-esteem and confidence

A person with hearing loss is unable to express their feelings or collaborate with others (Kotby et al ,2008). A decline in confidence and self-worth causes the person to lose their emotional stability. Due to their inability to interact with others, many persons with hearing loss suffer from a decline in confidence and self-worth. Learning to speak a new language can also be hampered by hearing loss.

- Social withdrawal

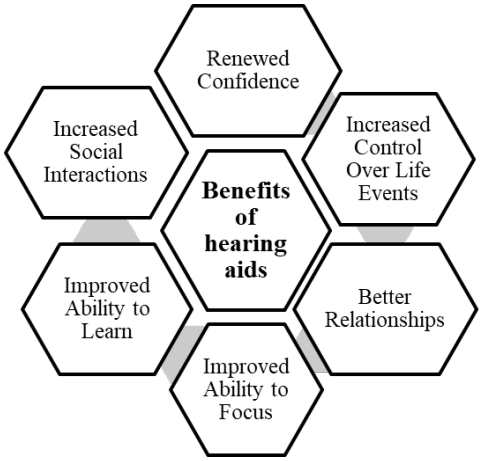
Reduced access to services and communication challenges cause social withdrawal. hearing about society's criticism of people with disabilities is another reason for social withdrawal.

- Fewer educational and job opportunities

Physically challenged are offered fewer educational and employment options because of their lack of communication. There are few career options for those with early-onset hearing loss because of their difficulties learning to speak, improving their reading comprehension, and completing their schooling. The effects of hearing loss can be reduced with hearing aids. The usage of hearing aids has several advantages that demonstrate how well they may help people with hearing impairments.

### 1.1.5 Benefits of Hearing aids

The number of Americans who suffer from hearing loss is 48 million. Merely 20% of people who are eligible for the usage of a hearing aid wear them. As it turns out, untreated hearing loss can cause more harm than once believed, and those who seek treatment report gains in every area of their life (Brooks, 1989). The following are some advantages of using Hearing aids to treat hearing loss: those who opt to use them are known to have greater general health, career success, and emotional well-being than those who do not:




(Source: Self prepared by author)

**Figure 2: Benefits of Hearing aids**

- Renewed confidence

A person with hearing loss can regain their ability to independently navigate the environment by receiving treatment. Because using Hearing aids reduces the anxiety associated with misunderstanding discussions, they can also assist in boosting an individual's self-confidence. Participants at lectures and social events will find it easier to participate in talks and other activities as knowledge grows.

- Better Relationships

Having effective communication skills with family and friends promotes happier, more enduring relationships. Hearing aids simplify social interaction and improve interpersonal connections by making it easier to follow conversations and hear what others are saying in loud settings.

- Increased Social interactions

More social interactions with friends and family and an increase in confidence are the results of improved communication. Individuals find it simpler to start up discussions and take part in activities like lectures or movies, which lessens social isolation and overall enhances social interactions.

- Improved Ability to Focus

Concentration problems arise with untreated hearing loss, particularly while speaking to others. Individuals can concentrate and converse with others more readily when they wear Hearing aids.

- Improved Ability to Learn

Untreated hearing loss may cause issues retaining new knowledge, according to recent studies. People may readily and without any difficulties learn new knowledge with the use of Hearing aids.

- Increased Control Over Life Events

A person with hearing loss will feel more in charge of their life if they can let go of their need for others to tell them what is happening in the hearing world. For those who have hearing loss, Hearing aids can significantly enhance their quality of

life by enabling them to engage more fully in social and recreational activities, enhance communication with loved ones, and even enhance cognitive function (Gatehouse, Naylor and Elberling, 2003).

## 1.2 Research Problem

According to a WHO research, 430 million individuals worldwide suffer from debilitating hearing loss, out of the approximately 1.5 billion people who now live with hearing loss (almost 20% of the world's population). Over 700 million individuals are predicted to have a debilitating hearing loss by 2050 (WHO, 2021). Health concern that negatively affects many essential everyday activities, such as social interactions, communication, and job-related duties. In previous literature, a notable absence of local studies was observed regarding how societal members tend to stigmatize individuals with hearing impairments who rely on Hearing aids. The misconception and marginalization of people with hearing impairments by society are still not sufficiently addressed. Moreover, there is a widespread deficiency of knowledge on the appropriate usage and advantages of technological Aids. Thus, conducting this research is important for promoting a better knowledge and comprehension of Hearing aids in society.

Hearing loss can cause serious problems in many areas of life. To improve public knowledge through integrated educational initiatives, a more thorough understanding of its functional and incapacitating elements is necessary. To obtain insight into how Deaf people's lives may be better in mainstream society, the research involves asking individuals about their impressions of and experiences with Deaf people and Deaf culture.

It was anticipated that most hearing participants would discuss their lack of knowledge about Deaf culture, their discomfort when interacting with someone hard of hearing, and their agreement that further research is necessary to fully understand Deaf culture. According to the results, which are consistent with previous studies, there is a need to increase public awareness of Deaf culture and individuals, as well as favourable attitudes toward those with hearing impairments.

## 1.3 Purpose of Research

The study's primary goal is to make a contribution to the body of knowledge about the social stigma and awareness around Hearing aids in Indian society. Studies on stigma have come under criticism for failing to examine stigma as a dynamic and relational phenomenon, instead focusing on how individuals' views affect social interactions. This study examines whether stigma has been assessed as a social phenomenon in relation to hearing loss and the usage of Hearing aids (Ruusuvuori et al ,2021, pp. 436-446). This study also highlights the need for increased national social awareness about Hearing aids in order to lessen prejudice.

To record different viewpoints and measurement-relevant information, specifically on social stigma and awareness connected to Hearing aids, this study will combine a variety of academic theories, models, and concepts from numerous relevant fields. These will be studied and utilized for discussion and interpretation of the findings in the following chapters. The list of major contributed studies and research includes but is not limited to (Manchaiah et al ,2015, pp. 1601-1615). The discussion of this study will also be supported by these research accomplishments and outcomes, and some of their most important conclusions and findings will be taken from and recognized in the next "Literature Review" chapter.The study's contribution is not to develop a new theory, but rather to expand on the one that already exists and try to close the gap left by the earlier research by providing evidence in the form of actual data from both society and the individuals who are experiencing social stigma.

## 1.4 Significance of the study

The study is to evaluate awareness levels and offer significant insights into the social stigma associated with Hearing aids in India. It will notably concentrate on outlining the difficulties that people with hearing impairments encounter in society, especially those who are associated with using Hearing aids. In addition, this study addresses the stigma attached to Hearing aids, which is an important topic that requires public knowledge and social awareness campaigns. The study will clarify the significance of professional and expert contributions, as well as government engagement, in raising public knowledge of Hearing aids. It will highlight the group

efforts necessary to lessen the stigma that Hearing aids carry in society. The study will also clarify the need for hospitals that care for people with hearing impairments to raise public awareness of the usage of Hearing aids by people with disabilities. It makes it possible for society to eradicate the stigma and acknowledge Hearing aids as a useful tool for those with hearing impairments.

## 1.5 Research Design and Questions

With the aid of methods and instruments, the research design serves as the primary framework for conducting a consistent study (Bleiker et al , 2019, pp. S4-S8). It can be regarded as an essential part of the research study since it enables the researchers to modify and uphold the research methodologies while gathering pertinent data for the investigation (Psomas, 2021, pp. 1146-1183). Co-relational, Among the various kinds of study designs are exploratory, explanatory, and descriptive designs.The descriptive research design is employed in this study, which enables the researchers to concentrate entirely on creating descriptions of the research topic and comprehending all of the deeper meanings and underlying motives for selecting the research themes (Coy, 2019, pp. 71-77). The descriptive research methodology is chosen for the study because it would enable the research team to get the most informative data possible for the study while also increasing the number of products that will be produced. It can be viewed that the method is one of the systems that are used so that it can calculate data and analyze them to get all of the results that are appropriate for the study (Zhang et al , 2021, pp. 2134-2152). It is recommended that primary and secondary data, which may be obtained from a variety of sources, be used to do research in all the cities involved. The sample population provides the primary data, while publications such as books, journals, websites, and articles provide the secondary data journals (Epstein and Salinas, 2018, pp. 61-91). It can be viewed that the secondary data are the already existing ones that have been gathered through previously researched scholars.

It is believed that primary research may be carried out using mixed methodologies to aid with both quantitative and qualitative approaches (BenSaleh et al, 2020, pp. 1-13). It focuses on intangible data under the qualitative approaches and

contends that qualitative data are more significant than numerical data. These techniques, which mostly rely on interviews, are behavioral. Focus groups, audio and video calls from the sample population, observations, and observational methods can all be used to gather all of the data. However, all of the analysis would be carried out using non-numerical concepts and the data collecting would involve making observations about the sample populations (Goyal et al, 2019). Conversely, quantitative research is carried out using numbers as opposed to words. It is predicated on observable, physically based evidence that is consistent with itself. As a result, for the research, both quantitative and qualitative approaches—also referred to as mixed methods—will be employed. This will ensure that all of the results are obtained using both types of methodologies (Rabe et al , 2021, pp. 129-141).

### 1.5.1 Research Questions

Ideas, opinions, or experiences are examined in qualitative research by gathering and analyzing non-numerical data (such as written, audio, or video). It can be used to get a deeper knowledge of a problem or to generate new research ideas. In order to identify patterns, compute averages, assess correlations, and extract general insights, quantitative research entails the collection and analysis of numerical data. The scientific and social sciences are among the many disciplines that use it. Statistical methods are used in quantitative data analysis to analyse and evaluate numerical data.

To understand the process of stigmatization around Hearing aids, more observational methods are needed. The reviewed studies in this research study used both qualitative and quantitative methodologies. The best research through questionnaires, interviews, and surveys was done. All associated studies concentrated on the experiences of participant's views and experiences concerning the stigma associated with Hearing aids. There were not enough studies looking at the social process of stigmatization. Numerous studies have shown that stigma has a detrimental impact on the usage of hearing aids.

For the Research, the main focus is to produce some understanding of the subject that has been chosen for the study (Extremera et al , 2020, pp .109-710). To do

that some relevant questions have been set and when these answers are developed then the objectives of the research will be solved.

The questions related to the research are:

- Why is hearing impairment ignored and why is it considered a social stigma?
- How does this stigma attached to hearing impairments impact the lives of hearing aid purchasers and how does it impact their personal and professional lives?
- How can awareness regarding the hearing impairments can be spread?

Some of the benefits and disadvantages are people having listening problems and how they miss significant conversations (Mafiniand and Dlodlo, 2017). The main objective of the study is to fight all the wrong perceptions about hearing impairment. The other significant question that this study would like to bring up is why the government does not extend its support in not providing sufficient awareness programs to overcome this stigma.

# CHAPTER II

# LITERATURE REVIEW

## 2.1 Introduction

The use of Hearing aids is very important for hearing-impaired people in India. Damage to hair cells, which are tiny sensory cells in the inner ear, is frequently the cause of hearing loss. As such, Hearing aids can help those with hearing loss not only hear better but also understand speech better. In children especially, speech plays a very important role and that is not possible without the proper use of Hearing aids that too at an early age (Alsayed, 2021).

Awareness drive plays a very important role so that hearing impaired people start using Hearing aids and live a comfortable and healthy life. A lack of awareness is a disaster. The society we are living in, especially in India, needs an awareness drive at the social level so people have no stigma at all in their minds and accept Hearing aids.

When people avoid Hearing aids, their social life is disturbed. They become isolated which leads to depression. Not only the individual but it affects the whole family. When elders have difficulty hearing and understanding, the family starts avoiding them in family-related matters, which affects them badly, and mental health-related problems disturb them badly.

Also, in the case of children, when parents try to find alternatives and avoid going to hearing specialists and getting Hearing aids fitted, this leads to speech delay. Parents are not ready to accept that their children have hearing loss that cannot be cured and the only solution is fitting Hearing aids.

When their children are not wearing Hearing aids for a long time, they are not getting speech therapy also, so they are not able to communicate. This delay affects their study also. On the other hand, if Hearing aids are used on time and regular speech therapy is taken, hearing-impaired children can join normal schools and can become better citizens with confidence. As society does not accept them as normal children, they develop an inferiority complex that hampers their normal growth. Here

what they need is support and encouragement from their parents, relatives, and teachers. Unfortunately, much awareness drive is lacking in India.

## 2.2 Theoretical Framework

It is important to combat ignorance regarding hearing loss in India. Decades ago, the Social Justice Ministry of India founded the Ali Yavar Jung National Institute for Hearing Handicapped to offer various sorts of support to the affected individuals. Ineffective rehabilitation and subpar management are required since social stigma still exists (nihhsrc.nic.in, 2024)

### 2.2.1 Cross-cultural research on hearing aids in India using the social representation theory

The goal of the current study was to comprehend how hearing aids are portrayed in Indian society (Manchaiah et al , 2015, pp. 1601-1615). This hypothesis reveals how Hearing aids are seen in society, which is highly helpful. Moreover, a variety of factors, such as stigma, cost, and perceived hearing impairment, have been linked to the unwillingness to buy and wear Hearing aids. A variety of techniques and theoretical frameworks, including social representation, prototype, and stigmatization, have been used in the study of attitudes regarding disability.

The ethics boards at nearby institutions provided their permission for this study for each of the participating nations. Among them were the All-India Institute of Speech and Hearing in Mysore, India; the Department of Social Welfare and Rehabilitation Sciences; and Anglia Ruskin University in Cambridge, UK.

The study employed a cross-sectional design and snowball sampling approaches to collect data from each of the four countries (Baker, and Welter, 2018). The research sample consisted of 404 general public participants from each of the four countries to understand their social representation. The four countries had different vocabularies when it came to issues like healthcare, the economy, and culture. This study was mainly helpful to know general public perception of hearing loss.

A sizeable percentage of people in each of the four countries had unfavorable or indifferent perceptions of hearing loss. These results showed that the general population still had a bad opinion of Hearing aids, which might help to explain why, even though they are useful, they are only chosen by a tiny percentage of those with hearing loss. This might be explained by the fact that the use of Hearing aids is a sign of hearing loss, which is related to verbal communication, one of the most basic human functions. A hearing aid suggests that a person's ability to engage with others is impaired, which can lead to negative social reactions.

Despite this, these studies point out significant features of attitudes around Hearing aids. The earlier studies on stigma have come under fire for largely concentrating on individual views and rather than considering stigma as a relational and dynamic phenomena, as Goffman initially defined it (Ruusuvuori et al., 2021, pp. 436-446). This analysis examines if and how stigma around wearing hearing aids and having a hearing impairment has been assessed as a social phenomena.To calculate the lack of access to Hearing aids, and the level of disease that may be prevented by using them, both locally and globally. Global Burden of Disease statistics served as the study's foundation (Orji, 2020, pp. 166-172). Those who were "in need" of Hearing aids were classified as having moderate, moderately severe, or severe hearing impairment. 401.4 million Individuals worldwide lacked access to Hearing aids. In certain areas, like Africa, the percentage is as high as 90%, while here in this region 83% do not use Hearing aids. The morbidity dropped from 25 million YLDs to 21.3 million YLDs, or 14.6% (95% UI 13.1–16), when hearing aid coverage was taken into consideration. According to estimates, the burden of illness in this group would decrease by 59%, from the present 25 million YLDs to 10.3 million YLDs, if every common case in need wore a hearing aid. Some possible tactics to increase access to hearing aids include the development of cutting-edge, reasonably priced technology with efficient service delivery models, modifications to laws and regulations to facilitate access, and public awareness and stigma-removal campaigns. (Orji, 2020, pp. 166-172).

All of this makes hearing rehabilitation a difficult task, and professionals need to work toward this goal to overcome social obstacles. To ascertain if and, if so, how

the social process of stigmatization, with its relational components, is considered, it summarizes and evaluates the literature on stigma and hearing aid rehabilitation in this review (Bleiker et al. 2019). This investigation explores the body of information generated about the connection between these two occurrences and looks at the methodologies used in these kinds of investigations. A particular focus is placed on the methods used. Although a recent study concentrated on the relationship between stigma and hearing impairment in the elderly, this review includes findings about the working-age population.

However, more studies should focus on how counseling might be included in Hearing Health programs to address people's experiences and anxieties of stigma. Hearing healthcare providers ought to consider including partners or close family members of those with hearing loss in conversations on when to begin hearing aid rehabilitation. Professionals who provide counseling to patients who have hearing impairments should advise them on how to respond to inquiries regarding Hearing aids, address worries about their disability, and deal with their fear of being stigmatized at work. The patient must be comfortable accepting the hearing aid and owning up to their disability.

### 2.2.2 Stigma and Health – A journal on Stigma regarding Hearing loss and Hearing aids

Societal stigma around hearing loss and the use of assistive technology presents substantial obstacles, particularly in light of the potential benefits that early and appropriate intervention may have for the well-being of those affected, their careers, and society at large. This scoping review's goals were to: (a) methodically compile and assess pertinent research on stigma and hearing loss; and (b) provide an overview of current findings and suggestions for further research and treatment approaches in this field.

Financial concerns, negative perceptions of the technical aspects of using Hearing aids, and a lack of knowledge or misconception about hearing loss and Hearing aids are the most commonly mentioned explanations in the literature after extensive research to determine the cause of the low rate of hearing aid use (Fischer et al, 2011) Additionally, Alongside such obstacles, stigma was a significant deterrent to

getting aid and receiving treatment for hearing impairment (Neylor and Kramer ,2010).

The literature on stigma and hearing loss in the elderly was the subject of a scoping review that covered works published between January 1982 and December 2014. Twenty-one pertinent publications in all were located (Chundu et al. 2021, pp.964). From a conceptual standpoint, the study looked at how people interpret and experience stigma, especially stigma related to oneself or others. There was a need for a more robust, theoretically grounded empirical study in this field. Most of the research was centered mostly on the description of stigmatizing views related to hearing loss and Hearing aids, and they nearly solely documented the stereotype related to reluctance to use them since they lacked a theoretical framework.

For older people with hearing loss, Hearing aids are an effective therapy option that may lessen the severity of these negative effects. Significant advancements in the realm of hearing aid technology have also lately taken place, providing access to more advanced signal processing, precisely customized amplification to fit the user's audiometric profile, and visually attractive solutions.

However, even with these noteworthy developments, only 20% of seniors 65 and over who may benefit from amplification adopted and used Hearing aids, indicating a low level of adoption and utilization among this population. This study solely addressed the preconceptions connected to Hearing aids being linked with “old age” (e.g., Hearing aids are for elderly people, make you seem older), focusing almost completely on the cognitive part of stigma (Johnson 1982, pp. 10–24). Additional stereotypes mentioned in the research included the following: "looking disabled," "weak," "embarrassing," and "less confidant"; "less communicatively effective when wearing Hearing aids" (Doggett et al, 1998, pp. 217-226).

### 2.2.3 The Stigma of Hearing loss

To concentrate on interventions that promote engagement and healthy aging, it is essential to look at the many forms of stigma that older people with hearing loss and those they frequently contact with experience. Interviews with couples in whom

one partner was deaf were conducted. The individuals included lacked knowledge or had not worn assistive listening devices for the preceding year.

It has been discovered that perceived stigma affects decision-making processes at many stages of the experimental phase of hearing loss, including the first acceptance of hearing loss, the choice to be tested, the placement of Hearing aids, and the date of birth. Stigma was tied to three interrelated experiences: ageism, vanity, and shifts in one's self-perception (Colgan, and Maxwell, 2020, pp.71). In addition, dyadic interactions, and external social elements such as the media and medical and hearing specialists had an impact. The results point to the necessity of de-stigmatizing hearing loss by promoting both cognitive performance and its assessment and treatment. They also looked at ageism and stigma from a theoretical standpoint.

However, the majority of recent research on stigma focusses on the problems of stereotyping, labelling, and stigma types. Very few investigate the real foundations of the stigma's societal creation. The causes for the perceived stigma in many health-related contexts were complex, but in the case of hearing loss, they were closely linked to the interplay of ageism, the stigma associated with disability, and a society that prioritizes youth and looks.

To completely comprehend the significance of the dyadic connection, more research was necessary. There was a dearth of knowledge about the stigma that spouses of the hearing-impaired experience, the effects of stigma contagion or stigma by the association in this situation, or how the partner's perception of the stigma associated with hearing loss and Hearing aids influence the behavior of the hearing-impaired person. Programs and treatments for dyads would be supported by an awareness of these dynamics.

Research was also required on how cultural factors affect how hearing loss is experienced and how Hearing aids are used (Agarwal et al ,2008). Few minorities were included in the final samples, even though a broad variety of hearing centers participated in the current study's recruiting. This might be due to a lower incidence among African Americans, but it could also be a result of prevailing cultural beliefs and socioeconomic constraints.

The present study's data demonstrates the widespread stigma surrounding hearing loss and assistive technology, as well as the strong correlation between this stigma and ageism. To support older persons and their families in maintaining healthy physical and cognitive functioning, strategies to reduce stigma were required. These included respecting hearing loss by improving its evaluation and treatment and highlighting the significance of continuing to be actively involved.

### 2.2.4 Attribution Theory to Explore the reasons adults do not use Hearing aids

Using Attribution theory to explore the reasons adults with hearing loss do not use their Hearing aids (Ritter, Barker and Scharp, 2020). It has been shown that Hearing aids can mitigate the negative consequences of hearing loss and are a helpful kind of therapy for individuals who have it. Even though they are a useful tool for treating hearing loss, many people refuse to use Hearing aids.

The present qualitative study looked at the reasons why hearing-impaired individuals do not wear their Aids. To find and examine the recurrent themes and reasons in these people's experiences, thematic analysis was used in combination with an attribution theory framework. Nine distinct themes emerged as explanations for why people did not wear Hearing aids. This is caused by four things: (1) not being required; (2) being stigmatized; (3) not being assimilated into daily life; and (4) not being ready because of inadequate education. There were five outside variables found, which are as follows: (5) discomfort; (6) economic challenges; (7) workloads; (8) technical mistrust; and (9) priorities (Coy, 2019, pp.55). By giving medical practitioners insight into the justifications people give for describing their experiences after receiving a diagnosis of hearing loss, a prescription for hearing aids, and a decision not to use them, these results advance the area of hearing healthcare.

It has been noted that hearing loss is becoming increasingly prevalent and affecting individuals of all racial, gender, and age groups. 48.1 million Americans over the age of 12 are estimated to suffer hearing loss, accounting for more than 20% of the country's entire population (Lin, 2011). Moreover, the overwhelming majority of individuals who have been diagnosed with hearing loss do not use Hearing aids.

Hearing loss can have a variety of detrimental impacts without the use of listening devices, including psychological problems (e.g., negative effects on quality of life and well-being). Despite this concern, there is a lack of comprehensive documentation about the precise reasons why people with hearing loss decide not to wear their Aids.

Therefore, the purpose of this study was to collect firsthand accounts from people with hearing loss and illuminate the justifications they offer for not using their aids, both external (originating from circumstances or context outside of their control) and internal (originating from personal traits or characteristics). The study's narrative analysis showed that many persons with hearing loss thought their impairment was a liability.

The final study indicates that both internal and external motivations contribute to the underutilization of Hearing aids:

### 2.2.5 Internally Motivated Reasons

- It is not deemed necessary because they can hear well enough without a hearing aid.
- Stigmatization - Young individuals said they thought it was humiliating to wear Hearing aids.
- Lack of integration into daily living - Based on their personal stories, it seemed that the main reason these people did not wear Hearing aids was that they could not fit listening devices into their everyday routines.

### 2.2.6 Reasons for Not Using HA That Are Driven by Outside Sources

- Discomfort - The survey found that people did not wear their Hearing aids for a variety of reasons, the main one being that they were uncomfortable. Among the specific causes were general pains, allergic responses, and loudness-related discomfort. As a result, these people thought their Hearing aids were extremely painful.

- Financial setback - Numerous responses emphasized the expense as a major deterrent to the use of Hearing aids.
- Burden - Some people think that using Hearing aids is difficult and that they need to be adjusted and monitored all the time.
- Priority setting - Purchasing Hearing aids is not a top priority for some people right now. They might have to put off buying Hearing aids to concentrate on treating other medical conditions or taking care of family members.

This research has several limitations, but it does a good job of summarizing the many features of using non-Hearing aids. These include an unrepresentative sample in terms of socioeconomic position and a deficiency in demographic diversity. The research also notes that the results' generalizability is impacted by the participant pool's restrictions.

### 2.2.7 Stigma and Self-Stigma Linked to Adult Acquired Hearing Loss

Research indicates that living successfully with hearing loss requires embracing one's condition. More precisely, a lot of people need to overcome poor self-worth and false guilt sentiments. Finding solutions for the issues their hearing loss is causing them to face in their daily lives will then be possible. Once this is done, people could broaden their goals for audiologic rehabilitation to include activities they believe are necessary for leading a healthy lifestyle (Southall, Gagné and Jennings, 2010, pp. 804-814).

### 2.2.8 Definition of Stigma and Self Stigma

By examining stigmatization from the perspective of outsiders, or people who do not possess the stigmatization feature, researchers can learn more about this social notion. There is a stigma associated with hearing loss. People without hearing are viewed by the public as "old," "cognitively diminished," and "poor communication partners."

Hearing loss is sometimes misconstrued as a character fault, intellectual disability, or personality problem (Kochkin, 2007, pp. 24-51).

Examining stigmatization through the eyes of outsiders those who do not possess the stigmatization trait—enables us to look at this social construct. Studies

looking into the "Hearing aid effect" have shed light on how other people view the stigma associated with hearing loss. According to studies, people without hearing see those who have it as being elderly, senile, and socially inappropriate. In addition to having negative perceptions of those who suffer from stigmatizing illnesses, outsiders often avoid these individuals. Identity danger is a common component of self-stigma. Individuals who experience self-stigma often display elevated levels of stress and embarrassment, as well as diminished self-esteem and productivity. During this study, one adult described his perception of hearing loss as saying that the thought of wearing a hearing aid is as if he would have to wear an adult diaper.

Maladaptive behaviors are more likely to be displayed by those who experience self-stigma. They're even willing to hold partners accountable for mumbling, even though none of us have hearing loss (Kochkin ,1993) effectively captured the expressions of self-stigma. His findings indicate that among adult hearing-impaired people who do not utilize Hearing aids, 40% list "stigma" as one of the top 5 reasons. When someone is diagnosed with hard hearing, they choose not to disclose their hearing loss to others. A lot of people who experience social stigma because of their hearing loss employ adaptive coping strategies to protect their identity, such as avoiding social situations where communication breakdown might occur. Depression and detrimental effects on one’s general health might result from social isolation.

- Rehab Services to Help People Get Rid of Self-Shame

A number of rehabilitation programs have successfully addressed the stigma associated with a certain medical condition. When it comes to mental health, self-stigma has been addressed using a variety of therapy approaches. These programs include:

Informational therapy on the specific health issue being addressed as well as the negative impacts of stigma and self-stigma.

## 2.3 Cognitive Behavior Therapy

### 2.3.1 Cognitive behaviour therapy components

Training on empowerment and self-efficacy through social relationships with others who have a health condition in common, especially those who have successfully

overcome self-stigma. Group treatments include most therapeutic programs that address difficulties associated with self-stigma. By assessing how individuals engage cognitively, behaviorally, and emotionally as well as in both micro and macro social situations, this organization aims to treat psychological diseases and promote psychological and social progress. In short, mutual support organizations focus on providing psychological support.

Getty provided proof that their group rehabilitation method worked in assisting men who had become noise-exposed and experienced hearing loss as a result of conquering their self-doubt. People were more likely to utilize hearing aids after finishing this training. Furthermore, individuals were more likely to request communication strategies that required both their communication partners' active participation and their disclosure of their hearing impairment to others.

Hogan and his colleagues conducted experiments to demonstrate the efficacy of their proposed treatment plan in assisting individuals in overcoming self-stigma. The researchers specifically noted enhanced marital ties, less family strife over phone calls and television noise, and more self-confidence. They may also control their stress levels at home and at work.

To the best of my knowledge, this theory accounts for a great deal more of the stigma around hearing loss and the ensuing requirement for using Hearing aids. They also did a great job of eliminating stigma; therefore, we can also say that their efforts to raise awareness were effective.

## 2.4 Summary

The research that is presented mostly focuses on personal perspectives and experiences related to stigma and awareness around Hearing aids. The study's primary goals are to increase societal knowledge of Hearing aids and assist impaired people in developing self-worth and confidence. The role that the government and other organizations play in promoting Hearing aids is another area of emphasis for the study. This study finds how hearing loss can loss the communication with society and finds that while using Hearing aids, the problem of lack of communication is

diminished. The study mainly focuses on hearing disability in India and the program run by the Indian government to enhance the use of Hearing aids. This study's Chapter 1 provides a brief overview of the societal stigma and knowledge around Hearing aids, as well as the effects of hearing loss on individuals and the advantages of using them.

The literature study of the social stigma and awareness regarding Hearing aids in India, as well as a brief discussion of the idea of subjectivity, is covered in Chapter 2. Various research approaches will be covered in Chapter 3, along with an analysis of the reasons behind selecting the specific approaches for this study. Results on the social stigma and knowledge of Hearing aids are presented in Chapter 4. In Chapter 5, the research provided more models about the social awareness of Hearing aids while also expanding on the contributions made. For people with hearing loss, the study results, conversations, and implications are especially crucial since they may help them utilize Hearing aids to become more involved in society.

# CHAPTER III

# RESEARCH METHODOLOGY

This research methods chapter aids in articulating different forms of aspects of how the process of the research is conducted (Azeem et al 2020, pp. 1291-1308). All the guiding principles, the research philosophy, the design, and the approaches that is taken in completing the research is followed in this section of the study. Any research must have a method as this is the branch of scholarship that can be defined as the method that is unreliable and creates spaces for results that are unreliable and as a result, it can undermine the value of the analysis of all of the findings (Daniel, 2019, pp. 60-65).

## 3.1 Overview of Research Problem

### 3.1.1 How has the loss of hearing caused a stigma?

The potential risks associated with hearing loss can be a significant barrier for those who need assistance hearing adequately. Some people are scared to take the following step because they are concerned about how their coworkers, family, or contacts will see them. For generations, unfavorable assumptions and biases have accompanied hearing impairment, and it astounds how many individuals still identify such misunderstandings with deafness.

Hearing loss was previously linked with "old age," poor speakers, social phobia, low intellect, and so forth. The fact is that hearing loss has existed since the commencement of time, and as knowledge and science have improved, the unfavorable stigmatization of hearing loss is becoming less prevalent.

Eliminating the discrimination against hearing loss may be extremely challenging, particularly for those who have been afflicted with hearing loss. During the study, its been tried tried to convince hearing aid buyers by asking them to check if they are influenced by the stigma connected with hearing loss and try to examine how it affects them at home, at work, and in their recreational time. Consider the benefits and drawbacks of hearing clearly against losing out on communication. Determine and deal

with the major attitude that is preventing you from seeking help. Hearing aids continue to reduce in size due to the quest for concealment.

To fight this stereotype, advertising could feature individuals of every age to demonstrate the advantages of increased listening and interaction (Alshehri et al. 2019). This will highlight the advantages of Hearing aids as well as the reality that deafness impacts individuals of every age.

As social entities, we value the views of the people surrounding us. Nevertheless, they should not let their apprehension of being rejected impact their auditory medical choices. Many people just do not comprehend the difficulties that folks with hearing loss endure, as well as the rewards of suitable intervention.

People's social lives are disrupted when they resist wearing Hearing aids. They become secluded, which contributes to melancholy. It affects the entire family, not just individuals. When seniors have trouble hearing and comprehending, the family begins to shun them for community concerns, which negatively impacts them and causes problems with mental health.

Education is indispensable to combat stereotypes. As we understand more about hearing impairment, it becomes clear that therapy is both practical and tolerable. Hearing aids do not make you appear elderly; instead, continuously asking individuals to clarify themselves is a source of annoyance.

### 3.2 Hypothesis

Hearing aids are one of the most significant innovations that have assisted humanity in retrieving a sense organ, the sense of hearing. The unfortunate aspect of Hearing aids is the social stigma surrounding them, as people believe that using Hearing aids results in incompetence or that a person is afraid of sliding into the classification of a disability. In this research paper the researcher wants to highlight the primary issue of viewing hearing aid use as a societal stigma.

The sense of hearing is fundamental since it is one of the essential sense organs. It is intertwined with every significant facet of our daily lives, and its loss will be

disastrous. If a person loses his or her hearing, it must be restored as soon as possible, or else recovery will be challenging. In India, there is a severe shortage of awareness. Awareness of this topic is critical since it will inform people about its use and how it may improve a person's hearing.

One thing that stoked this study is, the lack of interest by the state and the central government. Some non-governmental organizations (NGOs) and government institutions have been actively attempting to educate the public about the concern. This study here works in correlation with several schools and colleges in backward areas alongside some awareness programs set up by my peers and me independently as well in association with a few NGOs like Senior Citizen Association, Chandigarh, Himmotkarsh Senior Citizen Association, etc.

In summarizing many investigations, some of the topics that came to attention were that people always believe that using Hearing aids gives the sense that the individual is becoming older. According to my study, one of the most important responsibilities discovered was accepting reality and overcoming and facing stigma. Such stigma frequently results in despair, feelings of incapacity, social troubles, keeping distance from loved ones, and so forth.

After rigorous data analysis, various data points were discovered that demonstrate the number of individuals who use Hearing aids (Archana, Krishna and Shiny, 2016). According to study, adults find it difficult to utilize a Hearing aid. Aside from a lack of understanding, another factor to consider is the financial inability to buy a hearing implant. According to journal study, around 40% of individuals avoid using hearing owing to societal stigma. 20% of Hearing aid users are those in my study who can afford quality Hearing aids so can enjoy happy listening but use the trick in front of family and children that they will buy quality Hearing aids once used to it. Ultimately end up not using it, the real reason feels ashamed in public (Takahashi et al, 2007).

One thing this study would like to put forward through hypothesis would be the main reasons why people of any age group avoid Hearing aids and why is the government not providing appropriate funding to people who are not financially able to purchase them. Another perspective that must be tested among the folks would be the

time of Hearing implants used by a person on an average basis.

Hearing aid use is critical for hearing-impaired persons in India. Hearing aids are effective not only for increasing hearing but also for enhancing speech understanding in persons who have hearing impairment caused by harm to tiny sensory cells (hair cells) in the inner ear. Speech is highly vital in youngsters, and this is not achievable without the practical usage of Hearing aids at a young age.

Education programs are critical in getting hearing-impaired people to use Hearing aids and enjoy a pleasant and positive environment. An absence of understanding is a calamity. Persistent hearing loss is well-recognized to be connected to various health risks, including an increased risk of dementia, stumbling, and anxiety. Researchers estimate that most of this is due to the social confinement created by hearing impairment.

A Hearing aid amplifies sound waves as they reach the ear. Surviving hair cells diagnose significant resonances and generate them into brain pathways, which are then transmitted to the brain. The higher the impairment to a person's hair cells, the more acute the hearing problems and the higher the requirement for a hearing aid or cochlear implant augmentation to compensate. However, the quantity of augmentation that a hearing aid can deliver has inherent limitations.

Furthermore, if the inner ear is severely injured, even huge disturbances are not transformed into cerebral impulses. Hearing aid would be useless in this case. But all these patients can understand with given time frame of Hearing aid usage with proper instructions and further guidance on the next step. This is what my study focused on. A lot of awareness drives had to be in place.

Excellent organizational implementation and scheduling need positive collaboration. Hearing loss can interrupt interaction and significantly impair the capacity to complete the task. It can lead to misunderstanding or misconception of a mandate, order, or direction.

Hearing loss can make it difficult to engage in and enjoy many of life's valued experiences, such as recognizing a beloved one's voice or laughing, engaging in

constructive discussions with family and friends, witnessing humanity's greatest soundscapes, or watching beloved shows or sports on TV. Alienation, sadness, and chronic sickness have all been associated with hearing impairment.

Hearing health concerns have traditionally been largely unexplored. Many individuals connected the disease with advanced age (Archana et al. 2016). To put it another way, everyone who has trouble hearing must be elderly and past their prime. Consequently, many individuals are afraid to confront the issue since being elderly is distressing.

People frequently link the disease with poor cognition or intellectual disability. Additionally, some people believe that hearing problems indicate a lack of communication skills or social awkwardness. In summary, many persons who have impaired hearing assume others see them negatively as a result of their disability.

A portion of the issue arises from the perception of people with impaired hearing as "abnormal." Humans have an inherent need to belong to a group, which can often lead to inappropriate treatment of others. Nevertheless, growing awareness is assisting in reducing this problem.

Another contributor to the issue is hearing aid company advertising. They contribute to the prejudice by emphasizing the external appearance of their equipment. The look and concealment of their goods are important to many manufacturers. It's acceptable that they're reacting to customers' purchasing choices. However, this ad trend indicates that wearing a hearing aid is something humiliating and must be concealed.

Studies on views regarding the use of hearing aids and hearing loss piqued the attention of therapists and academics in current years, even though most analyses have been done from the standpoint of persons with hearing loss. Hearing aid perceptions have been connected to consequence factors such as assistance, acceptance of, use of, and satisfaction with hearing aids. Derogatory comments are associated with infrequent or non-use of hearing protection, however, positive perceptions are associated with more persistent utilization of hearing protection. In association with the increased application, persons with favorable views regarding Hearing aids reported higher levels of satisfaction with them. Some research, however, has found no connection between views regarding hearing aids, usage frequency, and satisfaction level. As a result, there is no

compelling evidence to imply that disposition influences hearing aid use. This might be due to the fact that the association between health behavior and attitude, as evaluated in previous research, is not always significant.3.2.1 Will the number of people using hearing aids rise?

The NIDCD funds investigations to improve the effectiveness of deafness. Researchers are examining if a shorter electrode array, for illustration, implanted into a part of the cochlea, can benefit people whose hearing impairment is restricted to longer wavelengths while keeping their perception of shorter wavelengths. Investigators are also investigating the advantages of combining cochlear implantation in one ear with either another cochlear implantation or a hearing aid in the opposite ear (Takahashi et al, 2007).

There have been several analyses and research activities on social understanding and sigma, but there is still more to be accomplished. State or federal administrations aren't making many efforts in this area. There are NGOs, but they are not well structured. They operate on a restricted budget and asset base since they are not sponsored by the government or local entities. Sometimes you don't get the right instructions or recommendations.

Additionally, NGOs can provide hearing clinics with some additional funding if they are affiliated with them. Small clinics in small communities typically lack the resources to maintain themselves. They may collaborate and promote the public in this way. It has been noted that all studies emphasize negative pressure, but neglect to emphasize the root causes of such prejudice in Indian society or how raising awareness might aid in eradicating such stereotypes (Steward et al, 2011, pp. 74-85).

### 3.2.2 How many people are suffering from hearing impairment in India and abroad?

According to a research study by the WHO, around 63 million people are suffering from significant auditory impairment. The effects of hearing problems are wide-ranging and may be severe (WHO, 2017). They include the inability to interact with others and the increased rate of communication in children, which can cause ostracism, alienation, and despair, especially in elderly persons with deafness. Lack of adequate hearing adaptations affects academic achievement and job possibilities in many places. Children who are deaf or hard of hearing in impoverished nations hardly ever attend school.

1.5 billion is the number of people who are suffering from hearing impairment around the world. According to WHO estimates, untreated hearing loss costs the world economy US$ 980 billion annually in health sector expenditures tuition reimbursement costs, reduced computational costs, and societal benefits. Health organizations promote immunization, appropriate ear care, and practices, addressing serious illnesses, and minimizing the use of neurotoxic medicines as ways to prevent hearing damage and deafness worldwide ( WHO,2017).

### 3.2.3 Test Case Scenario

#### 3.2.3.1 How many people are using Hearing aids?

8.9% of males and 5.4% of women over 45 years old use Hearing aids. From 2.3% of people in the 45–64 age group to 14.4% of those in the 65+ age group, hearing aid utilization (Forbes Health,2019)

#### 3.2.3.2 Why are young people who are supposed to use Hearing aids avoiding it?

Among people 45 and older, males were more likely than women to use hearing aids. It is derived from the above statistics that only a minimum number of people use Hearing aids (NCHS data brief,no.414,2021).

### 3.2.4 Test Case Scenario 2

There were many explanations given, such as the cost of the hearing devices, how well they accommodate and comfort, how well they maintain themselves, outlook, device variables, financial concerns, mental case considerations, mindsets of clinicians, ear issues, and visual appeal. Cochlear implant initiation usage is opposed by many because they are sensationalizing and simplistic, but other individuals also find it to be repressive and disrespectful. These analysts argue deafness is a different ethnic heritage that they are appreciative of, rather than the incapability to hear (Self prepared by author).

One of the other reasons why the use of implants, especially in young children or Hearing aids is avoided is because of the several makings of videos on social media platforms that are misleading which sometimes makes the user doubt its success. The firm’s most false claim is that implants completely convert the deaf into hearing

people. Cochlear implants are an aid, not a solution, to technological advancements. Even the most effective cochlear implants can never help unlock spontaneous hearing. Many receivers have trouble differentiating sounds, especially in settings with a significant amount of background commotion.(Self prepared by author)

### 3.2.5 Test Case Scenario 3

#### 3.2.5.1 Why do elderly people not visit hearing clinics or not use Hearing aids?

Even though hearing impairment in the elderly causes serious impairments, only limited %age of elderly impaired ever purchase hearing aid and many of those who do, seldom utilize it. Some of the reasons are as stated below:

- In a culture that is fixated on youth, it is challenging to give in to aging in any way.
- As a result, many consider our Hearing aids a sign of our advanced age. One of the key causes for their attempt to avoid it is this.
- The fact that a hearing aid is simply too complex is among the most frequent justifications for refusing one. The primary cause of this issue is the symptom of giving up on things as you get older (Drozd, 2018).
- The aesthetics of assistive devices are a key consideration, as developers are conscious. That is one of the reasons they keep shrinking assistive technology. The Hearing aids of today may fit within your ear.

Poor examination and fitting are frequently to blame for a negative hearing aid experience. However, even under ideal conditions, your hearing will not return to its previous state. While they certainly help, Hearing aids are not a panacea. They are known as Aids for this reason.

- Although Hearing aids are pricey, they are the preferred option for the majority of occurrences of elder hearing problems and do function in most situations. Beginning with a thorough physical evaluation and then locating an auditory specialist who will engage with you before, throughout, and after your acquisition are the keys to obtaining the most out of an earpiece.

### 3.2.6 Test Case Scenario 4

#### 3.2.6.1 What are the Social and economic reasons to avoid Hearing aids?

- Social issues

This issue affects all Contemporary civilizations. The general community regards persons with hearing problems as being 'old,' 'cerebrally reduced,' miscommunication companions,' and overall 'unengaging'. People conceal their hearing loss and begin to steer clear of circumstances where they might find it difficult to converse. This is harmful to both mental and physical wellness. Auditory impairment brought on by untreated hearing impairment is connected to Alzheimer and a higher chance of falling. It is noticed that people are always under the notion that Hearing aids do not work efficiently. The development of hearing aid equipment has advanced dramatically during the past ten years. Modern Hearing aids are smaller, more discrete, and perfectly equipped to differentiate language from ambient sound. These are also made to operate with all of latest technologies. Blue tooth connectivity has made life very easy for the hearing impaired. Mobile and TV connectivity has helped them to connect with the outer world comfortably.

- Economic issues

The lives of countless individuals might suffer if nothing is done as a consequence of inaction. If people do not take care of their hearing condition, the WHO predicts that by 2030, approximately 630 million people will have hearing problems that are incapacitating. That population may rise to more than 900 million by 2050. Furthermore, untreated hearing loss has a high financial cost. According to the WHO, hearing loss left untreated normally costs the world $750 billion annually (WHO, 2017).

Millions of individuals worldwide still struggle with the negative effects of untreated hearing loss and are unable to receive the necessary ear and hearing care treatments. Even while the effects of hearing loss on people and families are well known, there haven't been many initiatives to estimate the financial ramifications of the condition, particularly in low- and medium-income nations and globally.

This initial study indicates that untreated hearing loss has a substantial financial impact on the industry and the healthcare sector. Early statistics show that the majority of the global cost of medical treatment and educational expenditures

connected to hearing loss falls on low- and middle-income countries. Hearing loss may be detected and prevented with affordable public health interventions. It makes economical sense to prescribe hearing protection, especially if it is used often and combined with rehabilitation therapies.

- Response of the government officials on the matter of awareness:

People with hearing impairments have restricted involvement options. Stigma is the biggest obstacle to participation for those with it. There are, however, a few interventions now available to lessen the stigmatization of those who have hearing impairments. Through a comprehensive review, the study aimed to offer insight into treatments to lessen the stigmatization of persons with hearing difficulties globally.

The issue is that nothing has been done in India to significantly lessen the stigma towards those who have impairments. Furthermore, this study has attempted to find an appropriate effective prevention strategy that has been verified and released in the academic study by doing a comprehensive analysis to provide advice to the government. We want to learn how the work to reduce discrimination has been carried out and how it is benefiting people who are handicapped through this rigorous investigation (Dwarakanath and Manjula, 2020, pp. 1-8). The government may then weigh the advantages and disadvantages of each initiative to determine which is best for India.

According to Kochkin as cited in Gerontologist journal , stigma associated with hearing loss is a barrier for hearing impaired people, stopping them from using Hearing aids, accounting for 40% of these individuals citing self-stigma as a major deterrent, this means Hearing impaired people want to keep their hearing issues hidden from others due to fear of being judged by others. Many stigmatized persons use responsive survival methods, such as minimizing support networks where miscommunication may happen, to prevent situations of identifying danger caused by their hearing loss. Sadness and other harmful effects on one's physical well-being might result from isolation and loneliness (Kochkin, 2010, pp. 66-7)

- How far is the hearing aid a success?

Not all people with vision loss who qualify for enhancement use assistive technology successfully in everyday life. Enhanced patient contentment with Hearing

aids and more effective use of diagnostic facilities would arise from the capacity to forecast success with augmentation in daily life from measurements that may be gathered during a baseline examination of the patient's eligibility. In 50 hearing aid users, this study looked at how several socioeconomic and audiometric measurements correlated with two indicators of headphone performance. Challenging task attenuation measurements and other audiometric predictors were used. The QuickSIN test's unassisted and helped transmission ratio loss gave the greatest indicators of how well Hearing aids will function in real life. However, a large portion of this prognostic link seems to be caused by the patient's advanced age.

### 3.2.7 Summary

One of the most important inventions that has helped humankind regain a sensitive organ, the sense of listening, is the development of Hearing aids. The unpleasant thing about Hearing aids is the stigma that surrounds them in society. People think that wearing Hearing aids indicates ineptitude or that a person is terrified of being labeled as disabled. I have focused on the main problem of seeing Hearing aids used as a social stigma in this research paper.

Those who require assistance hearing enough may find it difficult to overcome the possible hazards linked with hearing loss. Because they are worried about what their workplace, family, or acquaintances may think of them, some people are afraid to go forward. It is astonishing how many people still associate misconceptions about deafness with hearing disability, which has long been associated with negative stereotypes and biases. The question about how far the Hearing aids will be used keeping aside the stigma is yet to take a lot of time.

## 3.3 Research Purpose and Question

For the Research, the focus is to produce some understanding of the subject that has been chosen for the study (Extremera et al, 2020, pp. 109-710). To do that there are some relevant questions which have been set and when these answers are developed then the objectives of the research will be solved. Some of the questions related to the research are:

Why hearing impairment is ignored and why is it considered a social stigma? How does this stigma attached to hearing impairments impact the lives of hearing aid purchasers and how does it impact their personal and professional lives? Some of the benefits and disadvantages are people having listening problems and how they miss significant conversations (Mafiniand and Dlodlo, 2017). The main objective of the study is to fight all the wrong perceptions about hearing impairment. The other significant question that this study would like to bring up is why the government does not extend its support in not providing sufficient awareness programs to overcome this stigma.

## 3.4 Research Design

It can be studied that research design is the main structure that can be used for the research consistent study, and it can be done with the help of techniques and tools (Bleiker et al., 2019, pp. S4-S8). It can be considered a crucial component for the study of research as it allows the research scholars to alter and maintain the techniques of the research in the process of collecting relevant data or the study (Psomas, 2021, pp. 1146-1183). In this research study, the descriptive research design will be used, and it allows the research scholars to put all their focus on developing descriptions of the research subject and understand all the deeper meanings and root causes for choosing the themes of the research (Coy, 2019, pp. 71-77). The reason why the descriptive research design has been selected for the study is that it can allow the team of the research to acquire the most insightful data for the research tidy as it also allows the research to produce more products for the study.

### 3.4.1 Research Strategy

It is the Research strategy that helps the study of the research move in a step-by-step process and it helps the researchers set an organized plan that would be conducted to solve all sorts of problems attached to the research (Cecez et al, 2020). The Research strategy helps the study in setting a general direction for the research. The mixed methods are some of the research strategies that can be used for the study. It implies that when the mixed methods the quantitative research and qualitative research will be collectively used in answering all the questions of the research.

In this research the process of framing the qualitative strategies, the researchers will be attempting to analyse the unbiased options of the various stakeholders who were in the health and social sector of India. To collect the data, there are both primary and secondary data collection methods be used for the study of the research. Across the globe, the use of primary and secondary data collection is very popular as it can collect the most authentic data. The primary data is identified as the quantitative one while the secondary data is associated with qualitative concept of data collection. The research instruments used are surveys and statistical records which will help gather important data about the subject.

It can be viewed that research Epistemology is the crucial segment of the research methodology which has the power to strive for the sources of knowledge that are authentic and actual facts that can be used for the research (Huang et al , 2018, pp. 826-833). According to his study, research epistemology is defined as positivism in this case. Since positivism is a research paradigm founded "on the ontological principle and doctrine that truth and reality are free and independent of the viewer and observer," it can be characterised as the "self-governing, independent, and objective existence of truth."

Similar to how natural laws govern the physical world, positivism in sociology promotes using the scientific method to examine society as guided by a set of "social facts" or rules. Institutions, social structures, and other external influences rather than internal variables like people's beliefs or motivations have an impact on people's actions.

We refer to this method as macrosociology. Positive sociologists use unbiased research techniques to unearth social realities. Émile Durkheim stated the following in The Rules of Sociological Method (1895): “Social facts are ways of behaving, thinking, and feeling that are external to the person and have the ability to exert control over him because of their coercive nature (p. 142)”. Since the topic here is associated with sociology it is best to apply positivism as a method of analysing the social facts, stigma and taboo of using hearing aid while scientifically backing up each data.

The research approach is one of the significant components of research methodology and it helps the researchers in assigning various forms of meaning to the team and approaches to the research (Al Mamun et al, 2018, pp. 134-147). The main approach undertaken is the deductive approach in this case. The deductive approach is

the test that can test the validity of the theories and on the other hand, the inductive approach can contribute to the emergence of new theories. In the case of deductive inference, it can be viewed that in terms of the premise being true, the conclusion should be true as well. It moves from general to specific. The data collection can be done so that the propositions are evaluated or there will be the presence of hypotheses which can be linked to the theory which are existing already. In this case also no new theory is tried to be proven and the existing theories are going to be managed here.

### 3.5 Population and Sample

It can be viewed that the method is one of the systems which are used so that it can calculate data and analyse it to get all of the results which are appropriate for the study (Zhang et al, 2021, pp. 2134-2152). It is suggested that all the cities related to research can be done with the help of primary and secondary data which can be gathered from various sources. Primary data are gathered from the sample population and secondary data are collected through articles, books, websites, and journals (Epstein and Salinas, 2018, pp. 61-91). It can be viewed that the secondary data are the already existing ones that have been gathered through previously researched scholars.

### 3.6 Participant Selection

Random participant selection is applied in the research. Participants are users as well non users with hearing loss.

### 3.7 Research Instrument

The research instruments that is used in the research are surveys and thematic analysis. The reason why these instruments have been used is that they can gather, collect, and analyse all of the data. In the research, these instruments are used so that there can be a thorough observation made for understanding of the stigma and awareness attached to hearing impairment in India (Chatzoglou and Chatzoudes, 2017, pp. 44-69). In the part of the survey section, certain questions have been set by the researchers and they are related to how the stigma and awareness are attached to Hearing aids in India.

With the help of the survey as the instrument, it can be viewed that it can help the researchers gauge the representativeness of the experiences and the views of the

respondents or the participants. The survey has the power to prime hard numbers on the behaviour and the opinions of the people and the thesis can be used in making relevant decisions. The survey has been chosen as it can be used in describing the characteristics of the population which is dense and the survey will be quicker and easier to conduct (Colgan and Maxwell, 2019). The survey questions are based on an online mode where the privacy and confidentiality of the respondents will be kept anonymous. All these questions were sent through the WhatsApp and the survey will be used in collecting feedback that would be honest the participant will most possibly give answers that will be honest because none of the participants and their identities will be revealed in any cases. Another instrument that has been chosen for the research study is thematic analysis.

### 3.7.1 Thematic Analysis

It can be viewed that the thematic analysis is a significant process that is used in the analysis of all the potential themes of the research and is the method that comes under the qualitative data analysis, and it can be taken as the non-numerical data which will be analysed, and these data are text, video, audio, and many more others. It can be viewed that in research thematic analysis is used so that it can be used in analyzing all the repetitive data, and it concerns all the coding of the data, creation of the themes, and data reading (Doern et al, 2019, pp. 400-412).

It can be understood that the thematic analysis is the approach that is considered unsupervised, and it lets the researchers create categories and performing which are statistical tests that can be developed without setting up any forms of process and rules in advance. It can be studied that thematic analysis is one of the phrase-based approaches that can capture the meaning of the phase in the correct forms. For example, talking about complicated narratives cannot be used in capturing the customer's intentions in stopping to take the help of the service.

### 3.7.2 Statistical Analysis

It is very crucial in creating the model that will be used in summarizing the understanding of how the data can be related to the population which is underlying. The fourth step is to prove and disprove the validity of the model and employ predictive analytics in running the scenarios which will be used in helping and

guiding all of the actions that will be taken in the coming future (Giossi et al, 2019). The main aim of statistical analysis is to help the researchers in analyzing and collecting data that are huge in numbers and help them identify the patterns that are common and help them convert them into meaningful information.

### 3.8 Data Collection and Method

It can be studied that the method for the collection of data that is to be be used in the process of that research has significance in producing a successful outcome of the research study. It is extremely essential to choose the right form of data collection method because a systematic and appropriate data collection method would enable the study to derive significant data which would help the researchers in producing results that are effective for the subject (Bahari, 2019).

The primary data collection technique and the secondary data collection method are the two key relevant data gathering strategies for the research investigation.

- A qualitative and quantitative approach

For the research study here, strategies for gathering data that are both qualitative and quantitative. The quantitative analysis deals with mostly gathering the information that can be used for actual data and metrics. It can be viewed that the quantitative analysis would help the researchers to collect data with the help of statistical and mathematical methods which can be measured so that the behaviour can be understood and observed (Bhardwaj, 2019, p.157).

On the other hand, qualitative analysis can gather data that is non-numerical, and it produces data that shows the quality of the subject chosen. In the qualitative analysis, all the focus is laid on understanding how the phenomenon is happening and why it is happening can be understood. It can be studied that quantitative analysis could engage in looking through data that is had and evaluating the actual numbers.

Ethical consideration

Unbiased question: It is essential to present questions and potential responses in an unbiased, manipulative-free manner in order to maintain ethical standards. Conduct thorough pilot testing to identify and correct any potential biases. While avoiding use of

leading questions and impartial language to ensure the integrity of the survey data.

- Beneficence: Making every attempt to maximise the benefits that the survey can offer to the general public as well as the survey participants. Clearly outlining the potential positive outcomes, such as the improvement of goods or services in the industry. The survey ensures that it operates meaningfully and benefits all parties involved by adhering to this ethical consideration.
- Show Consideration for Cultural sensitivities: Making sure that the survey is culturally responsive by recognizing and honouring the participants' varied cultural backgrounds. When designing the poll, avoid drawing conclusions based on cultural stereotypes and consider consulting with specialists or people from other cultural backgrounds. This procedure ensures that the survey respects and takes into account each participant's cultural values (Azeem et al. 2020).
- Transparent: Reports free of manipulation are a requirement of conducting surveys ethically. It is crucial to provide a thorough, unbiased explanation of the survey results and to openly disclose any possible conflicts of interest. The research method gains credibility and reliability when it is reported transparently.

The time frame of the study

***Table 3.1 Research Timetable Source: (Created by the learner)***

| Activities | Starting date | Ending date | Duration |
|---|---|---|---|
| Selecting questionsfor the quantitative research | 1-Feb | 15-Feb | 13 days |
| Preparing questionnaires | 16-Feb | 28-Feb | 11 days |
| Distributingquestion | 1-March | 15-march | 13 days |
| Collecting thequestionnaires fromthe sample Population | 16-march | 31-march | 14 days |
| Conducting an Interview forqualitative research | 1-April | 15-April | 13 days |
| Analyzing both forms of datacollected | 16-April | 30-April | 13 days |
| Findings | 1-May | 15-may | 13 days |
| Providing Recommendation | 16-may | 31-may | Days |

Gantt chart

***Table 3.2: Gantt chart (Source: Created by the learner)***

| Activities | 1-Feb | 16-Feb | 1-March | 16-March | 1-April | 16-April | 1-May | 16-May |
|---|---|---|---|---|---|---|---|---|
| Selecting questions for thequantitative research | | | | | | | | |
| Preparing questionnaires | | | | | | | | |
| Distributing question | | | | | | | | |
| Collecting the questionnaires from the sample population | | | | | | | | |
| Conducting interview for qualitative research | | | | | | | | |
| Analysing both forms of data collected | | | | | | | | |
| Findings | | | | | | | | |
| Providing recommendation | | | | | | | | |

## 3.9 Data Analysis

It can be studied that for the research study, statistical analysis can be used as it is the process that collects and interprets the data so that the trends and the uncovered patterns of the subject can be revealed. It can be used mostly in situations where there are processes that gather the research interpretations and use of statistical models and surveys are being used (Genc et al, 2019, pp. 253-264). It can be viewed that the statistical analysis can be completed following the five main steps and these describe the nature of the data which will be analysed in the process. Second, there should be the exploration of the data that underlies the population.

Data analysis is done based on data collected that is divided in four different categories based on buying behavior of the people.

Users: Those who have hearing loss and are already using Hearing aids. These people are considered highly valuable as provide real insight.

Potential users: Those who have been tested and diagnosed with hearing loss and about to buy Hearing aids.

Non users: Those who are already diagnosed with Hearing problem but are not using aids.

Data analysis in this section is dedicated by conducting comprehensive exploratory data analysis. The aim is to know insight of various reasons of social stigma to use Hearing aids. Through survey, interviews from real users and statistical analysis, the aim is to understand deeply the behavior of people with hearing loss, to know why they are hesitant to buy Hearing aids. Also, to understand how awareness can lead people to buy Hearing aids and use to get benefitted, laying to foundation for awareness techniques to overcome this stigma. Data analysis for both quantitative data from various survey as well quantitative data including old studies and journals plays important role to extract useful information.

Before uploading data, raw data is pre-processed to remove errors. The idea is to ensure accuracy of the collected data.

### 3.10 Research Limitation

The study has limitations that may hinder the generalizability of the findings. The study was limited to India. In reflection of the research in this study, a limitation of the study related to the small with about 100 participants. Although the study's findings are promising, they should be interpreted cautiously. Another limitation of the study was that it was difficult to obtain every respondent's demographic information, audiogram, hearing aid status, and access to verifiable data. It is impossible to determine a person's demographics and hearing condition. The study's next approaches suggest that distributing the questionnaire to patients in a sizable clinical environment would be optimal. Data on both hearing aid users and non-users must be gathered, and their behaviour must be thoroughly understood (Brooks and Hallam, 1998, pp. 217-22).

### 3.11 Conclusion

In this chapter, it was discussed that overall research methodology involves a combination of data collection, data pre- processing, data analysis and evaluation. The research design is carefully crafted to address research question.

It can be observed that the estimation of the reliability of the research can be done when various forms of versions are being compared through the help of the same measurements, it can be viewed that the validity is very difficult to assess but there can be estimation made which will be completed through the comparisons based on the outcomes which are significant to some other data or theory (Hofmann, 2019, pp. 361-374). It has been studied that there are various methods used to understand the reliability and the validity of the research but there have been some divisions which have been made to create the understanding of the relativity and the validity factors of the research. The reliability of the research can be measured with the collected data which will be tested with various forms of methods and sample groups but the information that gets developed must be reliable and if the method that is being used is reliable then the results that are being produced will be considered valid.

# CHAPTER IV

# DATA ANALYSIS AND RESULTS

## 4.1 Qualitative Research and Descriptive Research for the study

It was understood that people were afraid to wear Hearing aids and look old. It is important to overcome the associated stigmas pertaining to Hearing aids. Feelings of diminished self-esteem are closely linked to the elements that contribute to the stigma around hearing loss. It is observed that at times, people suffering from hearing loss are too embarrassed to wear Hearing aids. These people depict communication problems and are diminished cognitively. Individuals who have hearing loss give a variety of stigmatizing explanations, including– "too embarrassed to wear", "people make fun of you" and "makes you look disabled", and more to add on.

The purpose of the study was to create a questionnaire that would evaluate the listener's attitude towards hearing loss and the appropriate action that should be performed in relation to it. Research indicates that it is important to understand the attitudes and beliefs of a person to understand the intended actions of hearing rehabilitation. The participants of the study were asked to complete the questionnaires given at the end of the study and understand their attitudes and readiness for amplification. It is understood that untreated hearing loss can lead to dementia which is therefore linked with auditory deprivation. Research and literature studies also indicate that untreated hearing loss is linked with depression, anxiety, cognitive decline, and much more. It suggests that about one out of five persons benefits from wearing hearing aids and these are the ones who resort to them.

People who resort to Hearing aids commonly say – "I don't want to look old" Or "I don't want people to know that I have hearing impairment", and various other feelings and perceptions. The stigma associated with hearing aids stems from the emotions around a changed sense of self. These individuals put off getting help because they believe they are "disabled" or "cognitively impaired." It is suggestive that this stigma might be attributed to Western society, which values youth and beauty.

The questionnaire survey that was conducted amongst 100 people depicting hearing loss indicated the following results:

- 22% of the respondents said that Hearing aids would make them look slow at a mental level.
- 22% of respondents said that resorting to Hearing aids would make people treat them differently.
- 26% of respondents in the survey said that if Hearing aids are used, it would make them look weak.
- 29% of the respondents said that if they use Hearing aids, people will make fun of them.
- 29% of the respondents were too proud to use Hearing aids.
- 31% of the respondents said that using Hearing aids would make them look disabled.
- 34% of the respondents said that Hearing aids would make them look disabled.
- 35% of the respondents said that Hearing aids are too noticeable.
- 35% of the respondents did not want to admit publicly about their hearing loss.

It's quite common to have grief over hearing loss and worry about getting the necessary assistance. If one must overcome this stigma, it is important to accept that you are facing hearing loss and there is a need for treatment. It is also important to note that the Hearing aids of today's world are technological marvels with the best discrete designs, background noise reduction, directional microphones, automatic programming, smartphone compatibility, Bluetooth connectivity, and a lot more. Thus, it is important to get away with this stigma and accept gracefully that there is difficulty in hearing and that the best aid needs to be resorted to accordingly.

## 4.2 Secondary Research Review

### 4.2.1 Study by Brooks and Hallam (Uk)

This study set out to assess how people perceived acquired hearing loss and hearing aids. The average age is 74 years old, the participant pool consisted of 113 individuals who were the first users of Hearing aids. The study's conclusions showed

that the belief that using a hearing aid was stigmatizing did not accurately predict the result. Furthermore, only a few individuals said they had trouble using the hearing aid.

### 4.2.2. Study by Cienkowski and Pimentel (USA)

The purpose of this study was to examine young and older persons' opinions regarding hearing loss and Hearing aids. There were 186 participants in the study with an average age of 20, 221 participants with an average age of 73, and 53 non-users with an average age of 69.

The following were the study's outcomes and conclusions: Over one-third of participants showed discomfort about having Hearing aids, and over half of the students said they would be worried about being seen wearing them. About 60% of participants said that if Hearing aids were smaller, they would be more likely to be worn. More than any other group, 37% of elderly non-users thought that wearing Hearing aids meant getting older.

### 4.2.3 Study by Doggett et al (USA)

This study's main goal was to investigate older women's subjective and objective opinions of their peers who wore and did not wear Hearing aids. Twenty female subjects with an average age of 73 years were included in the research. According to the results, peers who wore Hearing aids were seen substantially more negatively than peers who did not, especially when it came to confidence, intellect, and friendliness.

### 4.2.4 Study by Erler and Garstecki (USA)

The study set out to determine how much stigma there was around hearing loss and using Hearing aids among women in three different age groups (35–45, 55–65, and 75–85 years old). 191 female individuals with normal hearing were included in the research. The outcomes showed the following conclusions: Age was found to have an impact on the unfavorable opinions people had regarding hearing loss and wearing Hearing aids. Furthermore, compared to older women, younger women tended to experience more stigma. In addition, using Hearing aids was linked to lower levels of stigma than hearing loss.

### 4.2.5 Study by Foss (USA)

The study's goal was to find out how the "typical" experience of hearing loss is portrayed on fictional television. The research looked at 276 television shows having deaf protagonists and stories involving hearing loss. The results were summarized as follows: Television shows seldom featured characters who had hearing impairments. Four characters used Hearing aids at the end of the episode, indicating that most characters had abrupt hearing loss that resolved on its own. In addition, hearing loss was portrayed as amusing, sometimes humiliating, and sometimes fatal. Furthermore, characters were seen making an effort to hide their hearing impairments from others.

### 4.2.6 Study by Glietman et al (USA)

The major objective of the study was to investigate the relationship between hearing impairment and disabilities. There were 737 participants in the research, and their average age was 59. The results showed that among persons under 65, hearing impairment had the largest association with the scores on the communication self-assessment.

### 4.2.7 Study by Hetu (Canada)

The primary objective of the research was to identify the connotations and behaviors that people ascribe to hearing impairment due to the stigma attached to hearing loss. The key conclusions and findings of the study revealed four themes, which were outlined below: seeing hearing loss as a major danger to one's social identity; experiencing hearing loss that leads one to believe one is deaf; concealing symptoms of hearing loss; being reluctant to admit hearing issues; and a few more example.4.2.8 Study by Hindhede (Denmark):

The study set out to experimentally examine how working-age people respond to a diagnosis of hearing impairment. The study included 41 participants, whose mean age was 58 years, who had just been advised to use Hearing aids. The following were the main conclusions and findings of the study: A significant number of individuals expressed concern that their hearing impairment may potentially hinder their social interactions. It was observed that a large number of individuals would conceal their hearing loss using various techniques. Many participants claimed that they looked "old" and ugly when they used Hearing aids.

### 4.2.9 Study by Iler et al (USA)

The study's goal was to find out how older people felt about their friends who were wearers of Hearing aids. 72 participants, with an average age of 74 years, were divided into three groups for the study: wives of hearing aid users, people who had never used Hearing aids, and those who used Hearing aids themselves. The study's main conclusions showed that age was a significant factor in predicting whether or not using Hearing aids may result in appearance-based stigmatization. In particular, the study discovered that growing older was a significant factor affecting the probability that a wearer of Hearing aids would experience social stigma related to their physical appearance.

### 4.2.10 Study by Johnson et al (USA)

The primary goal of the research was to find out how the public felt about elderly wearers of Hearing aids. A total of 290 students, with an average age of 22, participated in the study. About 46% of participants were split on whether or not a senior individual who wears a hearing aid looked older.A little over half of the respondents said that wearing a hearing aid was a more effective way for a senior to communicate than looking like one. The claim that a senior wearing a hearing aid appears less wealthy, gregarious, and intellectual was rejected by most respondents.

### 4.2.11 Study by Johnson et al (USA)

The study's main goal was to investigate how visible different types of Hearing aids were to determine whether or not they can reduce stigma. There were 150 student volunteers in the research, and their average age was 21. The study's main conclusion was that people, especially those who were previously wearing Hearing aids, found the visibility of the device to be a problem.

### 4.2.12 Study by Kelly Campbell and Plexico (New Zealand and USA)

The principal aim of the research was to comprehend the diverse approaches taken by distinct couples to manage hearing impairment. Twelve couples, with an average age of fifty-seven, participated in the study. The main findings of the study showed that all participants, including those with and without hearing loss, felt stigmatized by their condition and had negative perceptions of Hearing aids and hearing healthcare

professionals. The volunteers who represented hearing loss found it stigmatizing to use assistive technology and to make their condition known to other.4.2.13 Study by Kochkin (USA).

The creation of a consumer choice model was the main objective of the study based on the opinions of users vs non-users of Hearing aids toward these devices. One thousand and two hundred people who thought they had hearing loss participated. The study's primary conclusions and outcomes were: There were fewer favorable sentiments toward Hearing aids among non-owners. Those who were not owners had more favorable opinions about related stigmas such as "makes me look old."

### 4.2.14 Study by Kochkin (USA)

The main objective of the study was to quantify the reasons why clients who were hearing impaired refused to buy Hearing aids. 2,306 people without Hearing aids reported having hearing problems. The study's primary conclusions were that: Roughly 40% of the non-owners claimed that not buying Hearing aids was a result of the shame attached to hearing loss. Not wanting to confess hearing loss in public, feeling ashamed to wear Aids, stating that Aids were conspicuous, saying that Aids make you seem older, and saying that Aids make you look incapacitated were the most frequently mentioned stigma-related reasons.

### 4.2.15 Study by Kochkin (USA)

The study's primary goal was to ascertain how stigma and cosmetics affected people's intentions to buy Hearing aids. There were 2378 hearing-impaired owners and 2,952 non-owners with hearing impairments. The study's primary conclusion was that some characteristics, such as stigma and cosmetics, were associated with the purchasing of Hearing aids. Stigmas such as "not looking attractive," "embarrassing wearing Hearing aids," "old age symbol," and others were among them.

### 4.2.16 Study by Kochkin (USA)

The main objective of the study was to identify the main causes of the non-adoption of Hearing aids. Three thousand people had hearing loss without the usage of Hearing aids. The main result of the study was that more than half of the participants stated that stigma played a part in their choice to not utilize Hearing aids.

### 4.2.17 Study by Mulac et al (USA)

The study's main objective was to ascertain how young and old people viewed elderly people who wore Hearing aids. Seventy undergraduate students (mean age: 21) and seventy-one older individuals (mean age: 72) were among the participants. The principal findings and conclusions of the study were: In both groups, the participants' negative perceptions of elderly people with Hearing aids were similar. It was demonstrated that the body exhibited greater negative biases than post-auricular support. It was also shown that individuals using body Aids were perceived as older than those using post-auricular Aids. Individuals who wore Hearing aids were perceived as less social than those who did not. There were no differences found between the estimates of intelligence and income.

### 4.2.18 Study by Southall et al, (Canada)

The primary goal of the study was to better understand how stigma affects individuals with acquired hearing loss when they seek assistance. The average age of the ten study participants was 65, and they all wore Hearing aids. The following were the main findings and conclusions of the study: Most individuals reported going through a phase of denial and hiding after finding they had a hearing impairment.

People who were stigmatized and shown as having unhealthy coping strategies had higher levels of stress.

### 4.2.19 Study by Southall et al, (Canada)

Finding out what reasons motivate people to reveal or keep their hearing loss a secret from their employers was the primary goal of the study. Twelve people who utilized cochlear implants or hearing aids and had an average age of 59 were included in the study. The study’s main conclusions and findings were: An assessment of their degree of secrecy was the first choice. The revelation of a hearing impairment was influenced by social cohesiveness at work. It was also noted that being socially involved was often challenging for those with hearing loss.

### 4.2.20 Study by Southall et al, (Canada)

The main objectives of the study were to give a general overview of the stigma attached to hearing loss and to situate it within the context of identity threat produced by

stigma. The scenario of progressive hearing loss revealed two main characteristics of stigma: Hearing impairments grow more disruptive in social situations (a), and those who are stigmatized have a continuously declining ability to hide the stigmatized trait. It has been demonstrated that the sort of identity-related hazard that a person with hearing loss may encounter is greatly influenced by the communication model, the type and degree of hearing loss, and the age at which hearing loss first appears.

### 4.2.21 Study by Wallhagen, (USA)

The study's primary goal was to examine the many forms of stigma that older adults with hearing loss encounter. A total of 87 pairs of people had hearing loss (David, and Werner, 2016, pp.12). The principal findings and conclusions of the study were: Perceived stigma has a major role in determining the decision to ask for help, purchase Hearing aids, and subsequently wear them. It was also demonstrated that external social constraints and dyadic interactions had a significant influence on stigma. Three main variables have been connected to stigma: ageism, vanity, and shifts in one's self-perception.

## 4.3 Questionnaire Survey Results

Eighty percent of the participants finished the whole survey out of the total number of respondents. It should be acknowledged that the questionnaires that were only partially filled out were not included in the data analysis. The polls included participation from both men and women. The graph below displays the percentage of male and female survey participants:

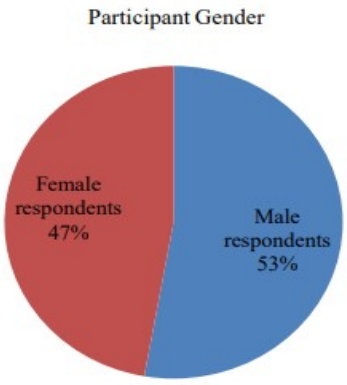



**Figure 5.1: Percentage of respondents**

This study indicated that there were 47% of female respondents and 53% of male respondents who completed the questionnaire survey.

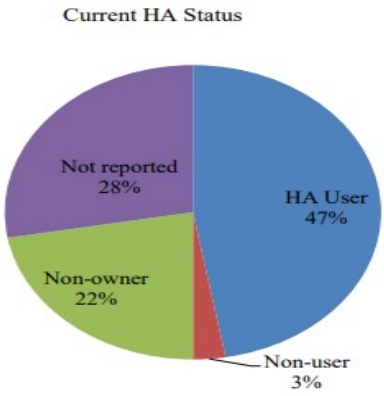



***Figure 5.2: Current hearing aid usage status***

Explanation: This study indicated the current hearing aid (HA) status of the participants. Among all, 28% were not reported, 3% were non-users, 22% were non-owners and 47% were HA users. This is well indicated by the graph illustrated above.

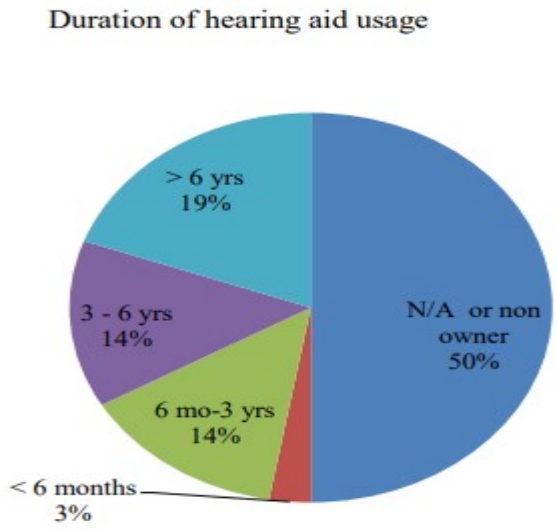



***Figure 5.3: Duration of hearing aid usage***

Explanation: The secondary research and the questionnaire survey conducted in the study indicated the duration of hearing aid usage. Amongst all, 19% of the participants were using the hearing aid for more than 6 years, 50% were non-owners, 3% were using it for less than 6 months, 14% were using it for 3-6 years. This is

completely understood by the graphical representation given above.

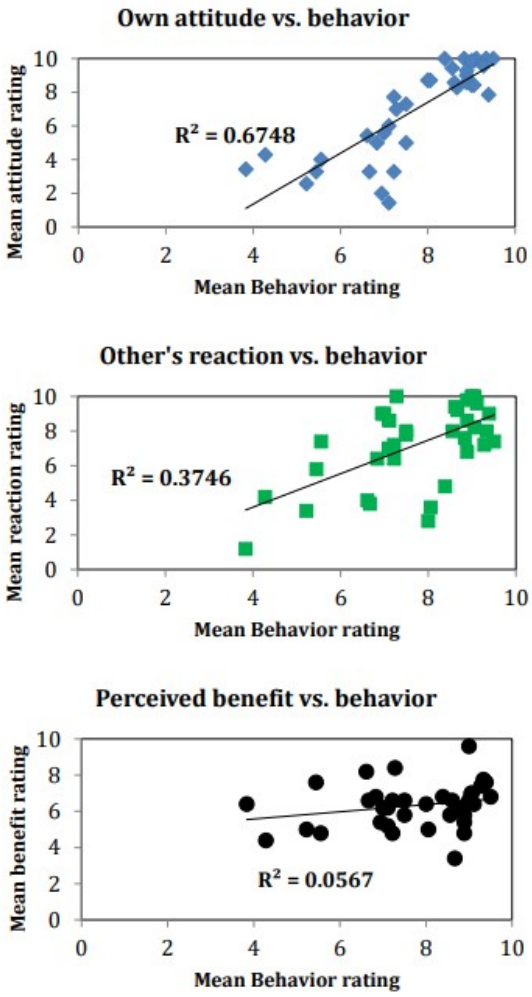



***Figure 5.4: Behavior against attitude and correlations of hearing aid benefit***

The study's findings demonstrated a favorable correlation between two variables: attitude and self-reported behaviour as well as responses from others. Furthermore, it was noted that there isn't much of a correlation between behavior and the perception of the benefits of wearing Hearing aids."

Thus, it is important to understand the social stigma and impact of Hearing aids across the country. Secondary research that illustrates the impact of stigma might provide a multitude of conclusions. Many studies have shown that people with hearing loss frequently feel stigmatized, regardless of how others perceive them. It is important to

recognize that those who experience the stigma have a harder time overcoming it than an outsider. Numerous academic studies have highlighted the profound effect that stigma has on those who use Hearing aids."

Researchers (Archana, Shiny and Krishna, 2016) discovered that because of their stigma, people with hearing loss really kind of refused Hearing aids. It was discovered via this secondary study that a survey had been given to 100 people who had hearing loss to determine the reasons for their rejection of Hearing aids. It was discovered that "awareness and attitude" was the most common justification given for refusing Hearing aids. These results are well depicted below:

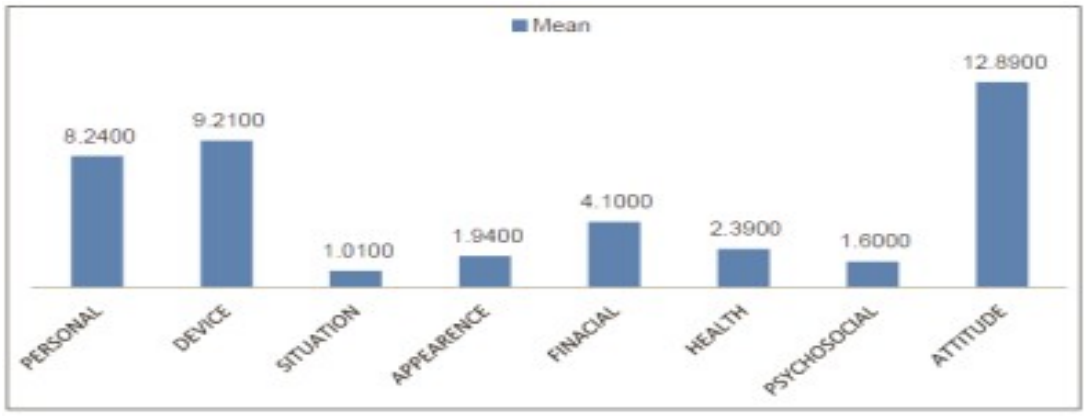



***Figure 5.5: Individual factor analysis (Archana et.al., 2016)***

According to the results section, the most common categories were thinking that using Hearing aids is a sign of incapacity, feeling weak and ashamed, and looking older. It should be noted that older adults are the group most affected by hearing loss. The fact that younger persons with hearing loss experience more stigma than older people is startling. An adolescent with hearing loss is less likely to see than an elderly person. Younger people with hearing loss feel more stigmatized as a result.

Erler and Garstecki did yet another study to look into how women in three distinct age groups perceived the stigma associated with hearing loss. These age categories were middle-aged women (55–65), elderly women (75–85), and younger women (35–45). Comparing the younger women to the other two groups, the results of secondary investigations showed that they had a more unfavorable perception of the stigma associated with hearing loss. It was also observed that the elder group's opinions were largely favorable (Erler and Garstecki, 2002).

Yet another study was conducted by (Kochkin ,1993, pp. 20-27) which investigated the best of reasons as to reasons why many who are deaf or hard of hearing refused to buy or wear hearing aids. "In conclusion, the study showed that the primary reason behind the underutilization of these devices is the stigma associated with wearing Hearing aids. The results clearly showed that over 40% of participants said that the main thing keeping them from buying Hearing aids was the stigma attached to hearing loss.

In a subsequent study by the same researcher, it was found that the percentage of respondents who rejected Hearing aids due to stigma was about 48% as compared to 40% in the 1993 study.

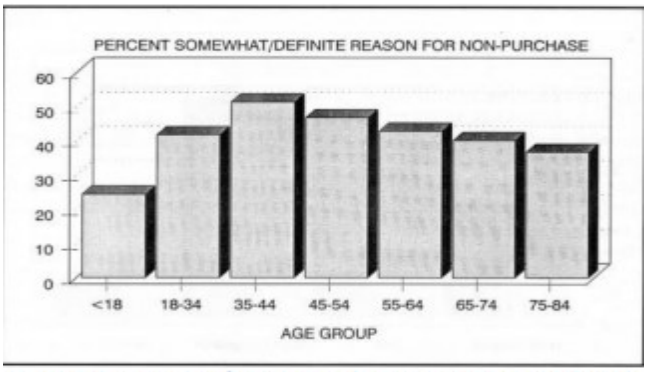


*Figure 2: Percentage of consumers, by age group, not purchasing hearing instruments because of stigma (Kochkin, 1993).*

***Figure 5.6: Percentage of consumers, by age group, not purchasing hearing instruments***

As previously mentioned, the (Kochkin , 1993) study showed the proportion of customers per age group who chose not to buy Hearing aids due to social stigma. According to the study, "perceived stigma" had a role in several decision-making processes that were represented by hearing loss.

The phrase "perceived stigma" should be noted since it suggests that the person using Hearing aids is doing so because of how they feel rather than because of what is happening.

It is critical to acknowledge and comprehend that this stigma influences not just the decision to wear Hearing aids but also three other important experiences: alterations in one's perception of oneself, low self-esteem, and ageism.

It is important to remember that changes in one's impression of oneself might include going from feeling competent to being less competent or from being clever to feeling less competent. Considering how hearing loss is seen by society in Western culture, it is not unexpected that issues of vanity are closely related to the humiliation that comes with it

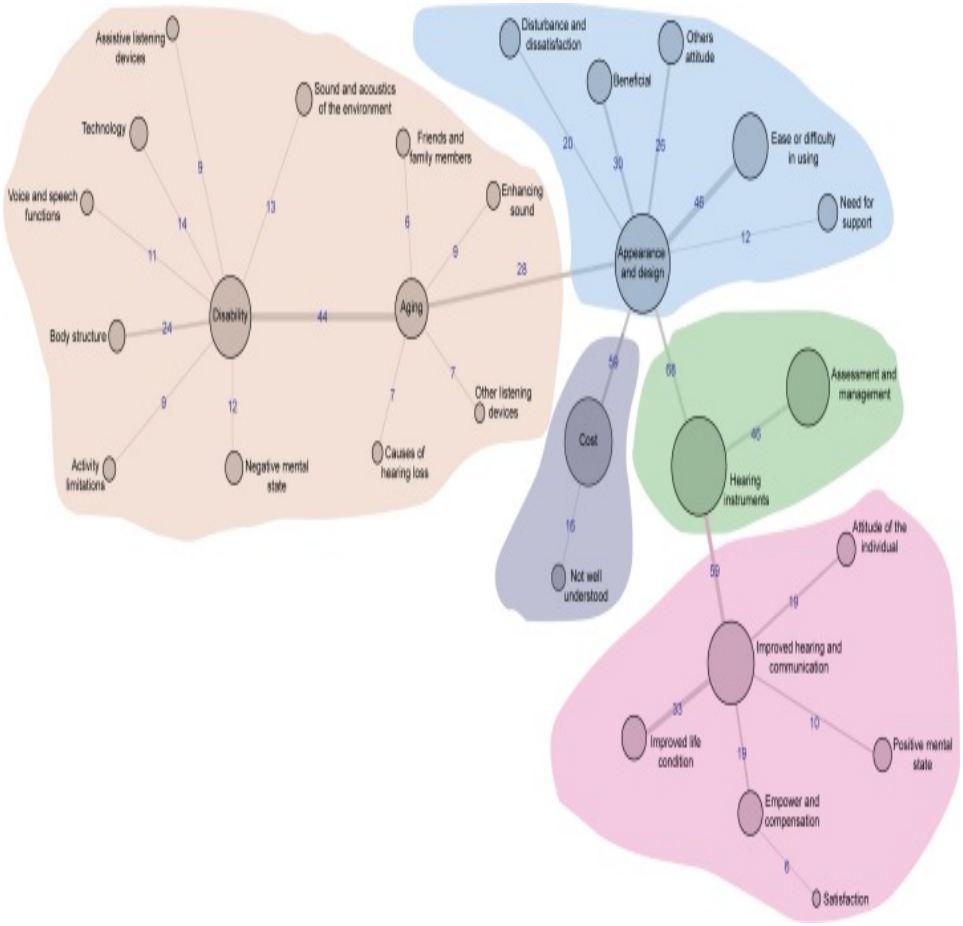



***Figure 5.7: Co-occurrence analysis index for every nation associated with assistive technology and their relationships. Source: (Manchaiah,et al,2015 pp1605)***

Moreover, mathematical graph theory serves as the foundation for the findings of co-occurrence analysis, commonly referred to as similarity analysis. This entails looking at each category's frequency as well as its relationships with other categories. Notably, the Transmuted software—basically an R-interface for multidimensional analysis of surveys and texts—is used to do co-occurrence analysis. This program displays the "maximum tree" index, which is a helpful tool in this case.

It is important to recognize that the various categories and their frequency are represented by the size of the nodes. Additionally, depending on the replies received, the linkages separating the various nodes show the inter-category relationships.

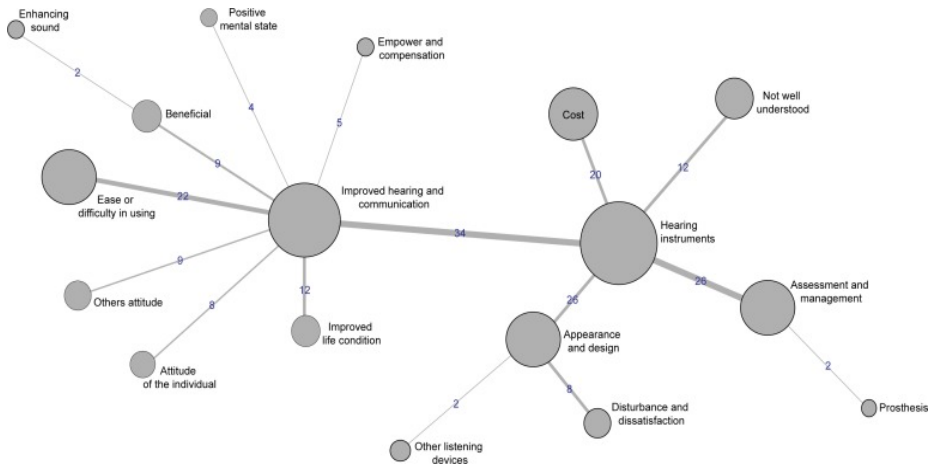



**Figure 5.8: Co-occurrence analysis index for India elucidates. Source: (Manchaiah,et al,2015 pp1605)**

Two main nodes with improved hearing were identified by the India Social Representation Index and communication together with Hearing aids, as seen in the above picture. When compared to other nations, the Indian social representation index is recognized as being more reliable. Thus, through this co-occurrence analysis studies, we have been able to draw a picture of stigma related to Hearing aids and how these could be dealt with from time to time. The strongest correlations are seen between ageing and cost, disability and technology, and disability and ageing.

The primary hearing aid categories and their relationships with one another are displayed in the co-occurrence analysis index for India. It should be mentioned that the size of the node is related to frequency, whilst the line's thickness shows the strength of the association between those categories.

The primary categories associated with Hearing aids and their relationships with each other are indicated and shown in the co-occurrence analysis index for all nations (as shown in the image). The perceived stigma is also well understood thereafter so that hearing loss stigmas are not ignored by any individual. Thus, secondary data analysis through a co-occurrence analysis index for all countries

specifically with regards to India, has been studied in the best possible manner and the associated results have been well indicated through research studies.

Here in, we will depict the results of the questionnaire section. To begin with, a short statement was given to depict the respondent's views and opinions about Hearing aids. Below each statement, there was a rating scale to showcase whether the respondent agreed or disagreed with the statement using a ranking system of 10 points. To indicate how strongly you agreed or disagreed with the statement, tick the corresponding box.

There were 250 participants in this questionnaire survey, out of which about 180 agreed that the current hearing aid styles are discreet and small, whereas about 70 respondents disagreed with this statement. Henceforth, about 180 respondents, for the next question, said that they would not buy the most discreet hearing aid, whereas others agreed to buy the most discreet hearing aid.

Most of the respondents (about 200 respondents) believed if they resorted to a hearing aid, people would perceive them as stupid. However, about 50 respondents believed that, if they resorted to a hearing aid, people would not perceive them as being stupid. Furthermore, most of the respondents believed they would resort to a hearing aid, regardless of whatever opinion people might have of them. Very few believed that they would never purchase the hearing aid as they would be perceived as stupid by people around them.

The majority of the respondents (about 220) did not agree with the fact that they can manage without a hearing aid for their loss of hearing. This means that they depicted a strong desire to resort to Hearing aids due to their loss of hearing.

The majority of the respondents strongly believed that their hearing loss is of great concern to them, and therefore, they would definitely try a hearing aid to help themselves. The majority of the respondents believed that if they tried a hearing aid, they could completely be cured of their hearing difficulty. The majority of the respondents felt embarrassed with their desire to resort to a hearing aid and had difficulty in adopting the Hearing aids. The majority of the respondents felt that people would act differently towards them for their use of Hearing aids. The majority of the respondents also believed that they would stand out in a crowd due to their use

of Hearing aids and that people would stigmatize them for their use of Hearing aids.

In the next questionnaire survey, the majority of the respondents believed that resorting to Hearing aids would make them feel older. However, they did not agree that they would move out as often as they used to before becoming hearing impaired. They also stringently believed that poor hearing made them feel different, incapable as well as inadequate. Most of them were concerned about being noticed by wearing Hearing aids. Most of them were pleased with the thought of resorting to Hearing aids. They also thought that people in their network would get angry or frustrated due to their hearing difficulties. They also felt that people strongly commented about their hearing loss and hearing difficulty and that they felt unhappy about it. They further believed that people around them associated Hearing aids with stupidity and they were strongly hurt when people commented about their hearing.

Most of the respondents strongly believed that people constantly ignore them because of their hearing difficulties. Most of them felt that they had lost their confidence since the time their hearing had been impaired. They also agreed that when there is the loudness of television, they end up in deep and strong arguments. They also felt that because of their hearing difficulties, their family and friends found it difficult and straining to talk to them. Most of them also felt it difficult to mix with people around them due to their hearing difficulties. They also were known to avoid small tasks due to their hearing difficulties.

Most of them accepted that they were not very outgoing and extroverted after they got the hearing disability, as they were before. Most of them also agreed that in a situation of strong arguments, they would give up important conversations due to their hearing disability. Most of them agreed that due to their loss of hearing, they miss out on important sounds such as the rain and birds singing.

### 4.3.1 Result of Interview

Here are some results for the interview questions that were recorded by different participants.

Ques. Do you think hearing loss has alterations in self-perception and how you perceive your own self? At times, people perceive you as able versus disabled and smart versus cognitively impaired, is this the case?

Answer. A respondent answered as below:

Seeing somebody wearing glasses and Hearing aids, nevertheless, makes it obvious that the word "decrepit" is not far from their lexicon. The exact definition of stigma is anything noticeable from the outside. People perceive you as different and say “Oh, he can’t hear either, and the hearing aid is hanging right out there” OR people say “Oh, he looks handicapped” and I don’t think anyone likes to be tagged as handicapped.

Ques. Another respondent was asked to clarify the relationship of hearing loss and disability.

Answer: “Yes, I do understand the relationship, and I think it is a disability. I don’t like to acknowledge it and I do not acknowledge it to a lot of people. It comes to my ego when I acknowledge hearing loss. You have to admit that you are deteriorating and that’s not easy to do.”

This individual chose not to get Hearing aids. She explained that her husband's voice was the problem and that her hearing was not bad enough to justify her choice.

Ques. What type of Hearing aids are essential or acceptable?

The answers of the respondents were as under:

“Well, you know, one does not like to advertise any kind of physical deficiencies that they have. It would be preferable if they could be disguised in any way. If I have to get Hearing aids, I don’t think I need them if they would look ugly on me”

Another participant was asked:

Ques. What is your general perception about resorting to Hearing aids?

Answer. “I think that today, there are some things that many people in society

just recoil about physical and mental disability. This is human nature, I guess. In my case, I have weak eyes, and oh my god! if I have weak ears, I will just be perceived as handicapped and you don't like to talk about that", Further, he said – I think, by resorting to Hearing aids, "I'm termed as being defective and that I'm hearing impaired" or you just know the label.

Ques. Another participant was asked about his perception of his spouse using Hearing aids.

Answer. "You begin to see your spouse as growing older and being impaired in some way. You just cannot help, but at a subconscious level, you feel that your spouse is having a defect at some level. My perceptions and pictures of people who have hearing loss are very old people. At times, I perceive them as being mentally retarded as they have hearing problems. The loss of hearing is just not a good social image.

Thus, it is amply clear that these expressions are perceived as stigmatizing due to hearing loss and the use of Hearing aids. The dilemma is highlighted for these participants as they face problems pertaining to hearing loss. Self-disclosure is done by certain individuals and not by others.

At times, some people would just "fake it", "fill in" or otherwise just not hear. They may often go unnoticed, which would lead to embarrassment and their context is often misinterpreted.

Ques. Another respondent was asked about his perception of hearing loss and his use of Hearing aids.

The following was his answer:

Answer. It is not that I'm trying to look younger than I am, I'm indeed proud of my years of experience. But, when I use Hearing aids, there's a kind of labeling as an old person due to my appearance. Like my grey hair, the hearing aid is another thing that identifies me as an old person."

He added as follows:

"I guess that it is silly that you do not want to admit that you are getting older

than you are. I have many younger friends too; it just makes you feel that you are getting old and I do not want to look old".

"I guess some people suffer from near-sightedness," said a man who cherished his beauty and health. On the other hand, hearing loss appears to be related to ageing.

When you use a hearing aid, you tend to look old. But hang on! Wait a minute! You are old! "Hey guys, you know I'm old, I'm an old man…."

One participant found that her lack of heat made it difficult for her to take part in the activities that meant a lot to her. She said that wearing Hearing aids harmed her ego and categorically rejected the notion that they would be stigmatizing.

Below is her response:

"Get over it, it's life! It just annoys me, and I guess it has something to do with ego. "She has reached a certain point, Oh my god! It's their image problem, it is just somebody else's problem. If I was taking insulin, is that a stigma because I'm insulin deficient? Not really! I do not care if using Hearing aids makes me feel better.

### 4.4 Summary of Findings

Thus, through the above results, the social representation of Hearing aids across the country could be well understood from a broader perspective. The several clusters that represented elements of social representation turned out to be focused on the aging and disability modes, Hearing aids, look and design, cost, and enhanced communication and hearing. Many secondary research studies have also compared the cross-cultural differences in the respondents which depicted the different social representations of Hearing aids. It is important to acknowledge and comprehend that an individual's beliefs on hearing loss and assistive technology have been demonstrated to impact the uptake and consequences of using these devices. There is nothing specifically about hearing aid technology, despite several attempts to evaluate the equipment for attitudes about hearing loss.

# CHAPTER V

# DISCUSSION

## 5.1 Discussion Based on Results

It needs to be noted and well understood that hearing loss is a problem that is growing significantly and is affecting millions of people. As per the WHO records in 2020, around 466 million people across the globe have disabilities about hearing loss. Research has indicated that hearing loss is the 3rd most common cause of long-term disability. Furthermore, it has been observed that noise-induced hearing loss is more severe in residents of cosmopolitan settings compared to those in rural settings.

According to WHO in 2019, when hearing loss is untreated, it costs the world around 750 billion US dollars. It is stated by the WHO that if prevention strategies, tools, and interventions to address hearing loss are well implemented, then it would eventually benefit people struggling with hearing loss and this would prove to be more cost-effective in the long run.

Findings in research brings all answers to research questions. First answer to why is hearing impairment ignored and why it is considered a social stigma. Through this study, it is well understood that adults between the age group of 21 and 50 years old with hearing loss disabilities have social stigma and very unhealthy attitudes about hearing loss. It is also observed through this study that middle-aged and young adults with hearing loss struggle with stigma about societal expectations assuming that hearing loss only affects older adults. It is also observed that many young adults and adolescents have much trouble accepting their diagnosis and are observed to be struggling with stigma. They do not understand the impact of long-term noise exposure on the future. Thus, this study is indeed good research examining young and middle-aged adults with hearing loss.

It was also observed that the theoretical frameworks that explain unhealthy attitudes and the negative effects of hearing loss in middle-aged and young adults are the social life theory and the life-course perspective. Through this theory, it becomes amply clear as to how society's expectations influence our development throughout our lives regarding work, family life, and education. These theories clarify that middle-aged and young adults have a hard time with hearing loss diagnosis. Also, it

needs to be noted and well understood that since hearing loss is traditionally thought to be exclusively affecting adults 60 years and older, the middle-aged and the young often feel ashamed when they are diagnosed with the problem of hearing loss.

Research has postulated many reasons for people with hearing loss to depict reluctance in engaging with the hearing rehabilitation process. It needs to be noted and well understood that the attitudes of an individual towards hearing loss and hearing aid have been shown to affect the adoption and outcomes of hearing aid use. There have been several attempts which have been made to test the instruments for attitudes toward hearing loss, but there is nothing specific regarding hearing aid technologies. One of the primary objectives of this study was to develop a questionnaire to assess attitudes toward Hearing aids to depict the social stigma (using the ABC model of consumer behavior and attitude). In all, there were 18 items based on the commonly reported feelings or emotions about Hearing aids. For each item, two rating scales were designated to reflect the behavioral and affective components. The needful survey was also done by posting into Hearing Loss Association chatrooms and also in the hearing loss Facebook groups.

The study made it amply clear that despite a high prevalence of age-related hearing loss in older people, there is relatively an unexplained low level of adoption of Hearing aids and use. Research indicates that there is much social stigma about Hearing aids, whereas it is observed that their use can vastly improve the quality of life for those with hearing loss. The aim and objective of this study was well met to explore the factors associated with hearing aid adoption and use. The needful questionnaires, interviews, and surveys were well formed and managed to meet the objectives of the study.

Answer to second important question that how does stigma attached to hearing impairment impact the lives of hearing aid purchasers and does it impact their personal and professional lives, research indicates that there is a high prevalence rate of age-related hearing loss in the elderly population. However, there is a low level of hearing aid use and adoption which can timely assist people with hearing loss. It needs to be well noted that hearing loss can have a detrimental impact on the life of a person. Due to hearing loss, various aspects of life are affected such as poor emotional health, communication difficulties, reduced quality of life, reduced cognitive function,

and much more. Through research, it is amply clear that when Hearing aids are used, the hearing ability by Hearing aids is much improved, through acoustic amplification of the sound signal. Although it is seen that hearing loss can greatly improve the quality of life of people with hearing loss, there are many social stigmas attached to their use and adoption by people. There is much reluctance observed in people to admit that they have a hearing loss and to adopt Hearing aids accordingly.

As discussed in this study, the 'hearing aid effect' is accompanied by a social stigma and negative perception towards individuals who use hearing aid devices. This is why most people, including parents and children, refuse to use them. Through this study, through descriptive research, and qualitative and quantitative approaches (mixed research), we aim to determine the current perception of individuals using hearing aid devices and the associated factors.

Through this study, it is well understood that hearing loss is a chronic condition that impairs the ability of an individual to communicate effectively. This condition can occur in children too causing speech delays. This leads to social and emotional effects causing frustration, isolation, loneliness, exclusion from conversations, and so on. The loss of hearing affects not only those with impairment but also those with whom such individuals communicate.

It is estimated that a total of 466 million people has disabling hearing loss and by 2050, one in every 10 individuals shall have hearing loss. For such people, hearing assistive devices (HADs) are a valuable solution to such issues of hearing loss and communication. Various social and environmental factors contribute to the low acceptance of HAD in individuals.

As depicted in the literature, the hearing aid effect has been described as a social stigma and there underlies negative perception about the same. These perceptions are accompanied by a need for assistance and a sense of being handicapped. These social perceptions need to be considered as they impact the acceptance in the disabled community. Thus, through this study, we try to understand how people of various age groups and educational levels view HADs in society.When people with hearing disabilities use Hearing aids, the first and foremost fear in them is that society will tag them as being deaf. They fear that social interactions will be restricted to a small group of people. If such an individual is not able to effectively

participate in various interactions, social gatherings, events, and group settings, he will be left alone and isolated. The ultimate consequences shall be gradual isolation, shyness, depression, and loss of self-esteem/self-confidence which shall then become a part of an individual's personality.

When there is a loss of hearing, and hearing aid devices are used, there is a persistent negative stigma for such people who are often reluctant to wear Hearing aids. To avoid associated embarrassment, such people avoid discussion amongst peers as a part of social stigma. Having a hearing disability and associated stigma disconnects you from the world and makes you prone to depression, dementia, and aging. There are associated health risks that come along when the right Hearing aids are not used at the right time.

The Hearing aids that go behind the ear are quite visible because of their size. This may ward off people from wearing Hearing aids. The ones that are small in size are normally fitted inside the ear and are associated with many types of hearing loss. When such people need Hearing aids, they resort to social stigma and associated financial burdens. Many times, there are unrealistic expectations, poor counseling, poor awareness of technology, and a lack of positive advocacy leading to low confidence in people resorting to Hearing aids.

With this study, we clearly understand that hearing loss is one of the most common chronic conditions in adults. Several studies that we have covered in the literature review have examined the behavior and attitudes of people with hearing loss. It is important to understand the social representation of people with hearing loss. The data that we covered in the study was analyzed through qualitative and quantitative methods. We now understand that hearing loss can result in various physical, mental, and social consequences to people with hearing loss and associated with them. Despite the associated adverse consequences, only a small section of people with hearing loss adopts interventions for hearing loss. Research has clearly shown the close association between hearing loss and factors such as identity, emotions, communication, and social relations. Thus, it is well understood that hearing loss is a multidimensional state of being and must certainly be addressed from a clinical perspective and that too in an interdisciplinary way.

In the area of health care, there is growing literature related to attitudes of people seeking Hearing aids. These studies focus on the attitudes of people facing social stigmas for using hearing aid devices due to loss of hearing. All these studies have generally used “stigma theory” as a theoretical basis.

There are some significant causes of hearing loss which include age, exposure to loud noise, excessive loud music, health conditions such as diabetes, stroke, brain injury, high blood pressure, or a tumor. When there is a loss of hearing, there are serious conditions such as depression, low self-esteem, reduced mobility, cognitive decline, and much more. It becomes difficult for such a person to engage with others, which therefore leads to social isolation and avoiding stimulating activities. Individuals with hearing loss need to explain to their friends and family as to which listening situations are difficult for them. They resort to Hearing aids which are small electronic devices worn inside or behind the ear. This device is known to use a microphone to pick up sounds and convert them into electrical signals. These signals are sent to an amplifier which increases the power of the signal and sends them through a speaker located on or in the ear. At times, it is observed that poor communication with an individual having hearing loss and others may lead to friction and arguments. This limits the social interactions of people and affects their performance at work.

At times, it is quite difficult for individuals with hearing loss to explain to their family and friends about the difficult situations that they are facing pertaining to listening. Such people normally ask other people to speak slowly and clearly. Such people must be aware of noise around them that can make hearing more difficult.

When people with hearing loss are asked as to why they do not resort to Hearing aids, they give stigmatizing reasons such as “too embarrassed to wear Hearing aids”, “makes you look disabled”, “people make fun of you” and much more. Through secondary research, it is even understood that dealing with hearing loss can be upsetting and scary at the same time. Unfortunately, this is only worsened by various social stigmas associated with the condition.

Secondary research makes it amply clear that some people are afraid to seek help for hearing loss because they think about how others will treat them and perceive them. This in turn can lead to people struggling with reduced hearing when people could help them significantly.

Secondary research also indicates that hearing health issues are poorly understood. Many people associated with this condition belong to old age. Many people are hesitant about addressing the issue as they are old, and this can often be unpleasant. Many people suffering from hearing loss associate with low cognition or intellectual disabilities. Many people who suffer from hearing loss believe that having difficulty hearing indicates poor communication skills and social awkwardness. These people believe that due to reduced hearing/hearing loss, others will see them in a more negative light due to this condition.

The life-course perspective indicates how the expectations of society influence our development throughout our lives regarding work, education, and family life. This theory well depicts that the social clock indicates where people should ideally be – such as in school, parenthood, higher education, or their career. It is critical to incorporate the life-course perspective theory which clearly explains why middle-aged and young adults have a tough time in their diagnosis of hearing loss. It is also observed that hearing loss is traditionally thought to affect adults 60 years and older. This theory also explains that many young and middle-aged adults feel ashamed when they are diagnosed with a condition that is more prevalent among the older generations.

There are various links between the social environment and the personal development of an individual. It needs to be well noted that hearing loss can occur at any time in an individual's life. It is a lot of emotional distress when a person is diagnosed with hearing loss disability at a younger age. It is amply clear that people often struggle with stigma about hearing loss which needs to be overcome. Untreated hearing loss in people between 13 and 70 years can result in social isolation, cognitive decline, higher levels of depression, and feelings of incompetence. It is important to understand the direct relationship between hearing loss and the social-emotional

health of a person. Few studies in the literature have researched the relationship between hearing loss and multiple aspects of social-emotional health (Al Asheq, and Hossain, 2019 pp. 19).

It is important to analyze the evolving limitations of stigmas of hearing loss. This study also analyzes the relationship between hearing loss and attributes of poor social-emotional health. The goal is to investigate the relationship between hearing loss and social-emotional health in adulthood to test the hypothesis that – People with hearing loss are more likely to struggle with poorer social-emotional health than people with typical hearing (Al Asheq, and Hossain, 2019 pp. 1-9).

Many people who have hearing loss are ashamed of their diminished hearing and are often hesitant to get help. This can cause a lot of stress and can also reduce the quality of life. It needs to be understood well that hearing is an important part of how we socialize and interact. Secondary research also indicates that hearing health issues can get worse without treatment. It is important to get expert help from the doctor to improve the prognosis. The social stigma around hearing loss has serious ramifications.

Secondary research also indicates that the social stigma around hearing health is slowly diminishing. Various trends are helping to drive this change. Newer technologies and increased research allow us to test and screen for hearing problems much more accurately. It needs to be well understood that patients do not always need to self-identify the problem before it can be treated. It is observed that awareness and education about hearing health are gradually improving. Children studying in school are regularly screened for their hearing loss and damage. As people are becoming aware of the condition, there is less stigma associated with Hearing aids and related treatments.

Research has made it amply clear that it is important to fight the stigma despite the good progress that has been made in reducing the social stigma around hearing health. There is still much to achieve in this area of research. It is important to take a moment and consider the pros and cons of seeking treatment. It is important to consider the various benefits of hearing better and being always engaged in conversations.

Secondary research indicates that overcoming the stigma about Hearing aids is very important. It will not only look younger, but you will also reap the health benefits of Hearing aids which include delayed onset of dementia. A study published by M.Wallhagen found that hearing loss stigma is greatly associated with “feelings of altered self-perception”. These perceptions are enough to cause a stringent delay in seeking treatment for hearing loss.

In the surveys, it was found that the people of Western culture were too embarrassed to wear Hearing aids. It was observed that the general population perceived individuals with hearing loss as being “uninteresting”, “cognitively diminished”, “being poor communication partners”, “making you look disabled”. “People make fun of you” and much more.

Research indicates that people often tend to hide their hearing loss and start avoiding situations wherein they struggle to communicate. When the hearing loss is untreated, it results in auditory deprivation which is linked with dementia and increased risk of falls.

It is well understood that nothing ages a person more than continually asking people to repeat themselves, answering questions inappropriately, and being disconnected from the world around them. It is observed that untreated hearing loss can make you look older, and it is seen that no one wants to watch you anymore. Often these people tend to be self-conscious once they resort to Hearing aids.

Secondary research indicates that people having stigma related to Hearing aids are often criticized for centering their perceptions regarding Hearing aids. Studying this kind of stigma is a dynamic and relational phenomenon as defined by Goffman in the literature review. The results were well obtained through both qualitative and quantitative studies, where questionnaires and interviews were the most common methods. Studies examining the social process of stigmatization were lacking. Most studies pointed out the negative effect of stigma related to the use of Hearing aids.

Secondary research has depicted that untreated hearing loss is linked to an increased risk of falls, cognitive decline, anxiety, and depression. Surveys in research

indicate that only one in five people benefit from Hearing aids who wear them. Researchers suspect that a large reason for this is the stigma about hearing loss and wearing Hearing aids.

There is no doubt that everyone wants to look and feel young and vital. Anyone who depicts hearing loss hesitates to admit it and wears a hearing aid for fear of looking old. When a person resorts to a hearing aid, he will make more and more people know about his disability which was otherwise unnoticed.

The first personal stigma associated with "wearing Hearing aids" is that society will tag the person as "deaf" and social interactions will be restricted to a small group of people only. The person resorting to Hearing aids will not appear young and at times, he will be ignored for not being able to effectively participate in various interactions, group settings, events, social gatherings, and meetings.

Even within the family, it is observed that people with hearing loss often feel ignored and are not presented before the guests of the family. Such people often tend to resort to gradual isolation, loss of self-confidence, shyness, depression, loss of self-esteem, and much more. Discussions with peers about the social stigma about Hearing aids also become a major problem. Not resorting to the hearing aid makes the person disconnect himself from the world and then it is observed that such people often resort to aging, dementia, depression, and cognitive disabilities.

Research also indicated that many Hearing aids, especially the ones that go behind the ear could be easily visible because of their size. This may ward off many people from wearing a hearing aid. The ones that easily fit inside the ear canal, cost a lot and are not suitable for ear canals and related types of hearing loss. The buying decision of such people is affected due to the financial burden of people wanting to resort to Hearing aids. Many times, such people do not resort to buying Hearing aids as their behavior is associated with unrealistic expectations, poor awareness of technology, poor counseling, and a lack of positive advocacy from current Hearing aids.

When the users use them, they feel low confidence and low self-esteem in resorting to these Aids.

Depending on the lifestyle of the person, the person depicting a hearing aid might need a few visits to an audiologist for fine-tuning and reprogramming. In India, the small towns and villages do not have hearing aid clinics or audiologists and travel costs across the city are cumbersome. Also, it is observed that reachability to remote areas with good quality and low-budget Hearing aids should be the utmost priority of the manufacturers.

According to the WHO (World Health Organization), there are over 900 million people who are expected to suffer hearing loss by 2050. The published studies have focused on the impacts of hearing loss on adults above the age of 60. This study will examine the relationship between hearing loss and associated stigmas about the use of Hearing aids due to involved social-emotional health in adults between the ages of 21 and 50. The undertaken literature review well describes the impact of hearing loss on the social-emotional health of people, thereby leading to associated stigmas. The data for this study is obtained from the 2011 wave of the National Health Interview Survey (NHIS) which was obtained via the Inter-University Consortium for Political and Social Research (ICPSR). The individual variables in the study were used for exhaustion, anxiety, and depression.

It is important to analyze the relationship between hearing loss and social-emotional health and for this, an independent t-test was conducted. It was found that the results of the t-test were significant at a statistical level. Thus, it was found that hearing loss is much associated with poorer social-emotional health, leading to associated stigmas.

Furthermore, it was seen that a linear regression was conducted to identify if there were demographic variables that influenced social-emotional health scores. The results obtained through linear regression showed that the participants showing hearing loss depicted social-emotional health barriers. Thus, the results obtained depicted that mental health professionals should be much more educated about the unique experiences related to hearing loss.

Through this study, it is amply clear that hearing loss is a problem that is growing and affecting millions of people. The Global Burden of Diseases related to hearing loss is the third most common cause of long-term disability. It needs to be noted under research that noise-induced hearing loss is becoming more severe in

residents residing in cosmopolitan areas as compared to residents residing in rural areas. Besides the associated stigmas, let us also understand that untreated hearing loss costs the world about 750 billion USD annually. It is now well understood through secondary research and descriptive research that using assistive technology such as Hearing aids and cochlear implants (Cis) can indeed be stigmatizing and costly as well. Thus, people who suffer from hearing loss are deterred from seeking help when symptoms first appear which limits them from active participation in social activities. The WHO clearly states that if tools, strategies, and interventions are used to address hearing loss, it would significantly benefit people struggling with hearing loss which would be more cost-effective in the long run.

It needs to be noted and well understood that adults between the ages of 21 and 50 years have stigmas related to their diagnosis and are also uneducated about the long-term consequences related to hearing loss.

Young and middle-aged adults suffer much from hearing loss and associated stigmas as they feel that hearing loss affects older adults only. Many psychological studies of research well state that young adults and adolescents have much trouble accepting their diagnosis related to hearing loss and they do not understand the impact of long-term noise exposure that is prevalent in the future. This well demonstrates the importance of research examining middle-aged and young adults suffering from hearing loss.

In the secondary research and literature studies through theoretical frameworks, it is quite understood that there persist unhealthy attitudes and negative effects of hearing loss in young and middle-aged adults. There is a life-course perspective theory that indicates how the expectations of society influence the development throughout our lives regarding work, education, and family life. This theory explains why middle-aged adults have a hard time with a diagnosis of hearing loss. Many young and middle-aged adults feel ashamed that they are diagnosed with an “older person’s condition”.

In literature, there exists a social role theory that explains “age roles” and “age norms” as frameworks for people across different age groups. As per this theory, specific expectations are set on how an individual should behave based on his age, occupation, gender as well as socioeconomic status per different periods in their life. It needs to be well noted that hearing loss can occur at any time in a person’s life

which may eventually lead to emotional distress when diagnosed with hearing loss at a younger age.

Thus, it is amply clear that the young and middle-aged group of people have a stigma related to hearing loss. Various studies indicate that people in the age group between 13 and 70 years old suffer from hearing loss which can eventually result in social isolation, feelings of incompetence, cognitive decline, and high levels of depression at the work front. It is important to understand the direct relationship between hearing loss and a person's socio-emotional health. Various literature studies have well-researched the relationship between hearing loss and multiple aspects of social-emotional health in middle adulthood (Naepi, S., 2019)

This study will examine all the associated limitations to well analyze the relationship between hearing loss and attributes of poor social-emotional health in participants. The ultimate goal of this study is to understand the close relationship between hearing loss and associated stigmas with the stated hypothesis: people with hearing loss are more likely to struggle with poorer social-emotional health than people who can typically hear well.

It is well noted and understood that most of the literature that has been published so far on hearing loss and social-emotional health focuses on participants in older adulthood. The complete literature related to hearing loss and social-emotional health for different age groups examines various parameters such as financial stress, social isolation, stigma as well as poor self-esteem. There are various physical changes found in older adults with hearing loss such as anxiety, social-emotional health, anxiety, depression, exhaustion, and social isolation. These physical changes lead to complete distress and social stigmas associated with hearing loss (Mulac, Danhauer, and Johnson, 1983, pp. 57-62).

Society perceives that only older adults struggle with hearing loss and this leads to associated stigmas. Hearing loss is also associated with compromised social-emotional health as well as financial stress. People with hearing loss often feel ashamed of themselves that they will have to make steep financial and healthcare decisions that are mostly reserved for older groups of people. The various theories

discussed earlier well explain the negative effects of hearing loss. These theories hypothesize the negative attitudes of young people and their associated behaviors once they are diagnosed with hearing loss. Society perceives and expects that older adults struggle much with hearing loss and this leads to associated stigmas between young and middle-aged adults.

When there is acute hearing loss, it leads to the need for persistent care by audiologists. The young and middle-aged group of people feel ashamed that they have to take steep healthcare and these decisions are typically taken for the older group of people.

When there is acute hearing loss, there may be associated symptoms such as sleeping difficulties, constant feelings of worry, being irritable, being tired, and feelings of restlessness occurring constantly. Literature studies discussed earlier well indicate that anxiety levels significantly decrease when the participants with hearing loss undergo corrective surgeries to fix their hearing loss.

Various literature studies indicate that people who are deaf or hard of hearing struggle with anxiety that can affect day-to-day functions. Research studies well indicate that people who are hard on hearing struggle much with anxiety that can impact day-to-day functions. People with hearing loss have anxiety-related physical issues such as disrupted sleep patterns. There could be communication anxiety, auditory deprivation, anxiety related to high-stress jobs, and social anxiety as well as affecting the hearing status of a person leading to depression. Evidence shows that there is a significant association between slight levels of hearing loss and symptoms of anxiety (Manchaiah, et al, 2015, pp. 1857-1872).

Studies also indicate that social phobia/social anxiety as well as problems with hearing loss are linked. Research also indicates that people with Hearing aids and cochlear implant users have low levels of social functioning and higher levels of phobic anxiety and interpersonal insensitivity.

Many literature studies conducted in the past discuss the prevalence of anxiety in people with hearing loss. They are indicative of the prevalence of depression and the acute symptoms of fatigue, difficulty concentrating, hopelessness, and irritability.

These people who depict social stigmas pertaining to hearing loss may also struggle with physical, mental, social, and emotional changes and these symptoms are persistently seen in these people.

When there is acute hearing loss and perceived disability, there may be psychological stress such as anger and depression. It needs to be well studied as to how the symptoms of anxiety and depression lead to stigmas associated with hearing loss. These people depict depression which impacts much on loneliness. It also needs to be well noted that fatigue is a very common experience among people with acute hearing loss. These people depict increased negative emotions and sleep disruption. Along with other factors affecting lifestyle, people with hearing loss depict coping difficulties and sleep disruption. People with hearing loss need more focus and effort and depict increased cortisol levels. It is well indicated that consistently high cortisol levels and acute stress can lead to metabolic disruptions, physical illnesses, and emotional exhaustion. It also leads to metabolic syndromes, diabetes, mood disorders, and cardiovascular diseases.

It needs to be well discussed that people with hearing loss often feel socially isolated which thereafter contributes to poor mental health. It is noted that deafness and hearing loss are isolated in nature. The impact of hearing loss can have deep characteristics of social isolation. The effects of social isolation are magnified, and it is indeed devastating for people who experience deafness and belong to rural communities.

People who struggle with unilateral hearing loss also struggle with physical turmoil such as tinnitus and vertigo which may lead to increased levels of depression and social isolation. If there is no proper socialization, it eventually leads to the isolation of the affected person as he eventually becomes very hard of hearing (Mafini and Dlodlo , 2017, pp. 44-69).

There are many reasons as to why people with acute hearing loss resort to Hearing aids. Hearing loss is indeed stigmatizing for older adults. Another reason why a person may not use Hearing aids is the associated financial cost. When a person uses Hearing aids, it affects his ability to participate in various kinds of social activities. When there are higher levels of advocacy, self-acceptance, and financial well-being, it

eventually leads to better self-esteem. When there is a hearing loss diagnosis, there is stigma and poor self-esteem, and the person eventually has to visit an audiologist.

It is well understood that many people cannot purchase Hearing aids and cochlear implants due to a lack of financial assistance. If a person is unable to purchase Aids, it could lead to poor mental health and quality of life and can also impact social interaction. Whether a person suffering from hearing loss can receive treatment or not depends on his demographic location, annual income as well as the level of social support (Leedy and Ormrod., 2019).

Thus, literature reviews and literature studies well indicate that loss of hearing can impact physical, social, mental as well as emotional health in older adults. Also, it is observed that people with hearing loss have poor social-emotional health as compared to people with typical hearing. It is important to examine the exploratory question - Do individuals with hearing loss who use a hearing aid have better social-emotional health as compared to people with hearing loss who do not use the hearing aid? (Kochkin , 1993, pp. 20-27).

Descriptive research and secondary research will indicate that there are several reasons that are postulated as to why a person with hearing loss is reluctant and engage in the hearing rehabilitation process. An individual's attitude towards hearing loss and Hearing aids has depicted the adoption of amplification which adversely affects the outcomes of the use of Hearing aids. There have been several attempts which have been made to develop test instruments to understand the attitudes of people towards hearing loss, but nothing specific has been determined about the hearing aid technology.

Through this study, a questionnaire survey was also conducted to assess the attitudes of people towards Hearing aids using the ABC model of attitude as well as consumer behavior. This study depicted well that there are 18 items based on commonly reported feelings or emotions with regard to Hearing aids. As discussed, for each item, two rating scales were assigned to well depict the behavioral as well as affective components (Kochkin,1990, pp. 10-20).As discussed before, the survey was distributed through Qualtrics and was posted on renowned chatrooms and online

forums in addition to hearing loss Facebook Groups. Results from the questionnaire surveys indicated internal consistency for both scales. Multiple regression analysis depicted that 2 out of 3 independent variables greatly impacted the adoption of Hearing aids, thereby leading to associated stigmas (Kochkin , 1994, pp. 29-29).

It is now well understood that people with hearing loss are hesitant to admit it and they have the fear of appearing old. There exists a negative stigma about Hearing aids, and it is important to overcome this stigma and related fears. When you wear Hearing aids, they assist you by keeping you engaged in the world. Research indicates that wearing a hearing aid assists you by keeping you well-engaged in the world. It is well understood that hearing aid and hearing loss stigma is a real thing. Hearing loss stigma is strongly associated with feelings of altered self-perception. The perception of being abled versus disabled and smart versus cognitively impaired needs to be understood well (Campbell and Plexico, 2012).

Most people using Hearing aids are too embarrassed to wear them. This is a problem across most Western cultures. As per the perception of the general population, people with hearing loss cite stigmatizing reasons such as “people make fun of you”, “too embarrassed to wear”, “makes you look disabled” and a few more reasons to add on.

Hearing loss is often harmful to the mind and body. People tend to often hide their hearing loss and start avoiding situations wherein they struggle to communicate. This proves to be indeed bad for physical and mental health. It is to be noted well that untreated hearing loss causes auditory deprivation and is often linked with an increased risk of falls and dementia (Wayner and Abrahamson., 1996, pp. 12-24).

It is indeed important to overcome the fear of Hearing aids. Research indicates that most people wait about 7 to 10 years before they do something about their hearing loss. The questionnaire survey indicated that in addition to the prevalent stigma, people often cite various reasons as to why they do not use Hearing aids. A few of these reasons are cited below:

"I am afraid that Hearing aids will make me look old."

"I do not like to go to the audiologist."

"I won't be able to afford Hearing aids."

"I believe Hearing aids would not work for me."

"I believe I will be dependent on Hearing aids."

Thus, as seen above, there are various stigmas and issues associated with the use of Hearing aids. It needs to be well understood that the stigma of hearing loss is completely natural especially when we age. In our society, unfortunately, there is a stigma about hearing loss due to negative connotations surrounding people with hearing loss. People who suffer from this condition avoid seeking the relevant treatment. They believe that Hearing aids would make them look weak, old, and less capable (Trychin, 1986).

When hearing loss is untreated, it leads to serious health issues, cognitive decline, social disengagement, and much more. If your treatment is postponed or you refuse to acknowledge it, you are placing both physical and mental health at risk. Many factors revolve around stigma surrounding hearing loss such as vanity, ageism as well as self-perception.

When people suffer from hearing loss, they see themselves differently from the rest of the world. They commonly contrast their former self and their current self. They compare themselves as "being whole versus not whole", "able versus disabled" and "smart versus cognitively impaired". To avoid this stigma, some people avoid visiting the audiologist, or at times just pretend that the issue is not just there (Steele and Aronson, 1995).

At times, people associate hearing with ageism and aging. It needs to be well understood that ageism is a form of discrimination that is based on the age of a person. People depicting hearing loss often find it difficult to relate to their friends and relatives. Often it is observed that hearing loss is strongly associated with aging and people find that the use of Hearing aids makes people look old and they are uncomfortable with this fact of life (Smith and West, 2006).

Some people really fear that wearing a hearing aid would make them look unattractive and bulky and would draw the attention of people unnecessarily. It is also understood that the concept of stigma is not an individual experience of a person. It is simply relevant to the framework of relationships and ways in which society reacts to those who are stigmatized. It is also well noted that stigmas are driven by societal expectations.

Answer to next very important research question that how can awareness regarding the hearing impairment can be spread. Research indicates, it is important that the benefits of Hearing aids are well spread, and people do not find it shameful to visit doctor and wear Hearing aids. To combat this stigmatization, it is important to showcase the benefits of Hearing aids by creating awareness so that people depict improved hearing and communication across various age groups. It is important to emphasize the benefits of Hearing aids and it is important to know that hearing loss affects people of all age groups (Smart and degner, 2000).

It is also understood that humans are social beings and the opinions of people around us (such as coworkers, friends, children, and spouses) matter. At times, people simply do not understand the challenges faced by those depicting hearing loss and the advantages of effective treatment. At times, it is observed that your partner displays a negative attitude towards your use of Hearing aids. This may make them reluctant to visit an audiologist to address hearing loss. On the other hand, they might be given a supportive environment for dealing with hearing loss so that they move forward effectively. It is important to explore the treatment options and wear Hearing aids without being stigmatized or judged.

It needs to be understood well that hearing loss is completely natural with aging. As we now know, in our society, there is a stigma attached to hearing loss. Due to the negative connotation attached to hearing loss, people often avoid seeking treatment pertaining to the same. These people believe that Hearing aids could make them look less capable, weaker, or even older (Quinn, 2006, pp. 83-103).

It needs to be well noted that when hearing loss is left untreated, it may eventually lead to cognitive decline, serious health issues, and even social

disengagement. It is important to acknowledge that there exists a hearing loss problem and there is physical and mental health at risk. There are many factors that are involved in the stigma surrounding hearing loss. These factors include vanity, ageism, and self-perception (Pachankis, 2007, p .328).

At times, people who suffer from hearing loss see themselves as different from the rest of the world. To avoid this stigma, some people hesitate to visit the audiologist or at times, they just pretend that the issue is not there at all. At times, many people associate hearing with aging and ageism. It needs to be well understood that ageism is a kind of discrimination that is based on the age of a person. At times, people who depict loss of hearing find it extremely difficult to relate to people around them. They are reminded of the fact that they are getting older and in an uncomfortable phase of life. Some people believe that resorting to a hearing aid might make them look unattractive and bulky and may draw people's attention stigmatizing them further.

It needs to be well understood that the concept of stigma is not just an individual experience. Society perceives these people differently and those who are treated are stigmatized by people around them. The advertisements given for Hearing aids are to be blamed partially. Thus, hearing loss is shameful and should be hidden by people who resort to Hearing aids.

It is important to combat this stigmatization and advertisers need to showcase the value of improved hearing and communication by depicting individuals of different age groups. It is important to emphasize the benefits of Hearing aids and the fact that Hearing aids affect people of all age groups.

Humans are social beings, and it is important to know the opinions of all around us (be it – children, friends, spouses, coworkers, or any other). They should not let this fear of stigmatization and ostracization influence their decisions regarding their hearing health. At times, people just do not understand the accompanied challenges of people who face hearing loss, and it is important to benefit these people with effective treatment.

It needs to be well understood that the key to fighting the stigma associated with hearing loss is education. The more we learn about hearing loss through education, it becomes obvious that treatment is socially acceptable as well as safe. It should be well understood that Hearing aids do not make you look old at all. When people repeat all these perceptions, they simply do this out of mere frustration. It should be realized that people who resort to Hearing aids can maintain social connections and even their careers (Miller and Major, 2000, pp. 83-103).

With education, it is understood that modern Hearing aids are designed to be inconspicuous as much as possible. Some people include designs that are completely in the canal whereas some believe in having the receiver in the canal. Both designs are well-designed, and people around do not even notice them. Some of the hearing devices can even connect to your smartphone making them extremely easy and convenient. It is important to treat hearing loss and this is indeed critical to current and future health. It is important to take time with the audiologist and encourage other people to do the same (Kechnie, 1976).

Thus, people quite understand that people with hearing loss have negative stereotypes and prejudices attached to them due to the perception of others. It becomes extremely important to research to study the attributes of people towards Hearing aids among hearing loss patients. It becomes extremely important to determine the factors that contribute to hearing aid usage amongst patients with hearing loss.

At times, people who suffer from hearing loss just don’t believe or accept that they have these problems. Many patients at times do not choose Hearing aids as they believe that they do not work or would not just help. At times, they even believe that Hearing aids are too expensive, big, unsightly, and uncomfortable. It is important that patients who depict hearing loss should be motivated enough to seek help related to Hearing aids and if they are not motivated well, the problem might just become too severe enough to cause social impairment (Major, 2006, pp. 193-210).

Patients who depict hearing loss showcase various attitudes towards hearing loss. This study conducted shows that the attitudes involve, (a) Denial of hearing loss,

(b) Negative associations, (c) Negative coping strategies, (d) Manual dexterity and vision, and (e) Hearing related low self-esteem.

There are several limitations of this study. Although the aims were well achieved, the limitations cannot be ignored. It needs to be noted and well understood that due to the short time frame, this research was conducted on a small size of population compared to previous studies. Secondly, the questionnaire was provided only in English form. Some patients also found it difficult to understand the questionnaire. Furthermore, not many theories were used to interpret and analyze collected data to research and conclude this study (Link and Phelan, 2006, pp. 528-529)

It is important to determine the impact of this study on society. The majority of the patients had attitude problems towards hearing aid usage. People tend to accept hearing aid usage as the severity of the disease. The advice of the audiologist becomes very important when one resorts to Hearing aids. The findings of the study also assist the clinician in understanding why these patients are reluctant to use Hearing aids. Through this study, general awareness about Hearing aids is increased among medical practitioners which in turn reduces anxiety about hearing and usage among them, to remove the associated stigmatization (Link and Phelan, pp. 363-385).

Future studies are indeed important to determine the accuracy of the study with a larger sample population and within a longer time frame for the study. To improve the accuracy of data collection, the questionnaire must be translated into different languages for better understanding. Further research is suggested to widen the scope of each domain of the questionnaire.

Thus, through this study, it is understood that stigma regarding hearing loss and Hearing aids presents a deep challenge in society. It is difficult to deal with the associated consequences and it is important to understand the stigmas about hearing loss, their caregivers, and society at large. It is important to systematically obtain and evaluate the relevant literature on stigma and accompanied hearing loss. There is an absolute lack of the theoretical framework and this study depended much on the description of the stigmatic attitudes associated with hearing loss and Hearing aids. At

times, it was well understood that the size and the visibility of Hearing aids were the main features associated with absolute reluctance to use them and be thus aware of the associated stigmas.

Through the questionnaire, it was amply clear that age-related hearing loss is amongst the most common chronic conditions reported by older people, and this makes it a public concern. With aging, it is observed that hearing sensitivity deteriorates gradually as well as progressively. There are other factors affecting hearing loss with age such as chronic diseases (related to kidney and heart) as well as noise exposure.

Many difficulties arise when elderly people depicting hearing loss depict adverse listening/hearing conditions such as noisy situations and during social interactions. The various literature studies well indicate that age is a significant factor in selective hearing tasks which separate from consequences related to hearing loss (Lightsey and Barnes, 2007, pp. 27-50).

Research well indicates that untreated hearing loss is associated with a reduced quality of life and diminished physical, cognitive, emotional, and behavioral functioning. When Hearing aids are used, there is an effective treatment option for older adults with hearing loss which greatly reduces the impact of negative consequences.

In recent years, remarkable progress has been achieved in hearing aid technology allowing selective amplification. Despite the significant improvements in Hearing aids, the uptake and use of Hearing aids amongst the elderly population is not much. This is what is indicated by research studies conducted in the past.

It is well understood that stigma is a major factor that inhibits help-seeking and treatment for hearing impairment. It is indicative that the empirical research on the topic is limited (J. D and Wegner, 1995). Studies conducted in the past depict that the use of Hearing aids amongst the elderly is descriptive and not based on any theoretical model. The concept of stigma has been assessed and clearly defined through this study (Lazarus and Folkman, 1984 )

It is important to understand that one of the ways to get the best understanding

is to summarize and scrutinize the existing knowledge in literature. We, at the core, understand that this is the aim and objective of the study. It is also important to understand how future research shall proceed amidst the elderly population and what is the important field of inquiry.

For the secondary research and descriptive research, a scoping review was conducted (Arksey and O'Malley,2005, pp. 19-32). There are various reasons for undertaking a scoping secondary research and review. These reasons include: (a) to well examine the range of the area of research, (b) to determine the gaps in existing literature, and many more to add on.The secondary research methodology advanced by the authors depicted 5 stages: (a) identification of the research question, (b) identification of relevant studies, (c) selection of the most appropriate studies, (d) reporting and summarizing the results.

The computer-based literature search strategy to identify the publications on the topic of the stigma associated with hearing loss was well taken from PubMed, PsycNET, and CINAHL databases. These contained publications that cater to a wide range of health professions related to hearing impairment care. The main keywords used for the secondary research data search were hearing loss and stigma, Hearing aids and stigma, hearing impairment and stigma, hearing disorders and stigma, and a few more to add on. The search was restricted to peer-reviewed journals only in the English language and was checked for different reference lists (Kricos, 2000, pp. 7S-14S).

The studies that were identified for secondary and descriptive research were identified with the key terms in the title, abstract, and article. In addition, the books, book chapters, dissertations, and publications were excluded. No exclusion criteria were established for the type of research design used (Johnson1982, pp. 10-24).

The inclusion criteria had (a) older adults depicting progressive hearing loss in the population of interest, (b) outcome measure clearly focusing on stigma pertaining to hearing loss and Hearing aids. The common dimensions of the concept of stigma in the literature were: behavioral dimensions, emotional dimensions, cognitive dimensions, and a few more to add on. The search results from all the databases were

well taken care of. The resulting papers were pooled well, and all kinds of disagreements were resolved through discussions (İpek, 2020, pp. 101-659.).

As per the questionnaire surveys, many answers were obtained from the respondents. At times, people who have hearing loss feel depressed as they cannot follow conversations as normal people do. At times, people with hearing loss also feel that they are pressured to be assessed for their hearing loss. They feel that they would get used to wearing Hearing aids in a matter of days. People who use “behind the ear” Hearing aids feel that they are quite small and inconspicuous. At times, people who resort to Hearing aids feel that they are quite stupid, and this becomes their general perception (Iyer, 2019, pp. 16-29).

The questionnaire survey also showed that many respondents felt that they should overcome any difficulties through their own efforts by resorting to Hearing aids. At times, some people feel that Hearing aids do not help much and are of no use. At times, some people feel that their poor hearing makes them feel inadequate and incapable. At times, people feel that difficulty in hearing is not of a major concern to them at any given moment. At times, people also feel that using a hearing aid embarrasses people many a time, so they just do not use it. At times, people just use Hearing aids to please someone else. At times, people just do not want a hearing aid at all as it makes them look old and incapable. Some people say that they just avoid company talks as conversations are just too difficult. At times, people just react differently to them when individuals wear a hearing aid.

It needs to be noted and well understood that at times, people are just ignored because of their use of Hearing aids. People often keep quiet when they are in conversations amidst people using their Hearing aids. They feel that if they resort to Hearing aids, they will stand out in a crowd. At times, these people feel they are less than a person if they use Hearing aids. Some people just do not bother when they resort to Hearing aids.

At times, people who use Hearing aids feel that people around them just do not know how to react towards them. At times, people feel stupid when they resort to Hearing aids due to their hearing loss. When several people are chatting, it often

bothers them that they lose the thread of the conversation the resort to Hearing aids (Iler, Danhauer and Mulac, 1982, pp.101-659).

At times, people feel that it is due to pressure from their family and friends that they resort to Hearing aids. Some people feel that they look older and incapable when they resort to Hearing aids. Some people do not perceive hearing as a serious problem for them. At times, people feel that wearing Hearing aids would make them appropriately meet strangers. At times, people just ignore them if they are wearing Hearing aids (Hurlimann, 2019).

Some people will try a hearing aid, but they think that it would not be of any help to them. People realize that it takes them weeks and months to get used to a hearing aid. At times, people are ignored just because of their use of Hearing aids. People feel ignored and avoided due to their persistent use of Hearing aids. People, at times, feel that their hearing problems are quite small and minor. People feel that they can listen without any difficulty. People feel that at times, their hearing is not so bad, but they still need Hearing aids. People often feel isolated from other people due to their hearing loss. At times, people often feel restricted due to their hearing incapabilities and use of Hearing aids.

Through the questionnaire surveys, it is amply clear that many reasons have been postulated as to why the use of Hearing aids has been stigmatized. People are often reluctant to use Hearing aids. It is important to check the attitudes of an individual towards hearing loss and the use of Hearing aids. Several attempts have been made to check test instruments to know the attitudes of people towards hearing loss (Huang et al, 2018).

The primary objective of the study was to develop a questionnaire to assess the attitudes of people towards hearing loss so that consumer behavior could be well understood. Hearing loss has been one of the most prevalent chronic conditions among aging adults, particularly in developed countries. There are various reasons for the lack of uptake of Hearing aids and it could be due to its increased costs. Thus, it is indeed important to study the attitudes of people towards hearing loss and the use of Hearing aids. At times, people feel that they are perceived as older and incapable of

their use of Hearing aids. It is important to overcome stigma and cost barriers when resorting to Hearing aids (Hofmann, 2019, pp. 1-9).

At times, people depict difficulties pertaining to their hearing loss and their use of heating Aids. It comes as no surprise to them, and it is important to know the perception of people once they resort to Hearing aids. Those who have self-reported hearing difficulties are likely to seek out amplification. Those people with severe hearing loss are more likely to adopt Hearing aids as they want to minimize their effects on hearing loss, and it is likely that they adopt Hearing aids.

It is important for people to admit the serious consequences of hearing loss. It needs to be noted and well understood that without the realization of people, hearing aid adoption of people cannot take place. Hearing impairment is closely associated with poor quality of life of people, behavior disorders, cognitive difficulties, increased mortality in men, depression, loss of functional capacity, poor quality of life, and much more (Hisrich and Soltanifar ,2021).

In older adults, it is observed that hearing loss comes at a time when there are many physiological changes in the body including an increase in chronic illness and memory loss too. There are many known benefits of using Hearing aids, which include – people living longer, happier, healthier with the best of self-concepts. It is well noted that success with the use of Hearing aids requires cognitive and behavioral changes which include seeking professional help, accepting hearing impairment, following through with the best of rehabilitative recommendations, and much more. It is important to understand the attitudes and beliefs of people who resort to Hearing aids.

The questionnaires for the study are developed to assess the attitudes of people towards hearing loss. Thus, through the questionnaire study, it becomes important to assess the attitudes of people to resort to Hearing aids. Market research needs to be well done for the development of the questionnaire.

The person's attitude is formulated by three contributing factors – cognitive (inherent beliefs), affective (feelings or emotions) as well as behavioral (actions). Several items in the questionnaire were adopted.

Secondary research in this study indicated that many people who could benefit from the amplification do not use hearing devices. There are various reasons for the non-adoption of Hearing aids. When there are preconceived expectations, it can create prejudice towards Hearing aids. These prejudices of expectations are built on the account of the experiences of others. There are different stages of the process of hearing loss, which include the following:

Attraction attention

Becoming suspicious

Jeopardizing fundamental self

Sensing tribulation

Secondary research and literature review are indeed important to understand the reasons for stigmas associated with Hearing aids. One must overcome various reasons for non-adoption of Hearing aids, to minimize the hearing loss, stigma, time and trouble, and much more. For people who are elderly in age, hearing loss is perceived as another inevitable bodily decline. This is very common in the medical field. It is important to realize the hearing loss behavior, accept it, and look for ways to overcome it. When there is hearing loss, the patient demonstrates reluctant behavior and is concerned about adjusting to the amplification. They are certainly concerned with the cost and adjustment process. The patient well understands that he needs to adapt to Hearing aids, but at times, simply does not accept it gracefully.

As per undertaken literature, there are 4 important factors in the readiness of a patient in terms of acquiring amplification. The first significant factor is trust. The patient must have complete trust in the professional care being given and trust that the Hearing aids are great products being recommended.

They have to believe that the right decision is being taken care of. They must have a sense of urgency that the hearing loss is affecting their daily life. The third important factor is that the patient must take complete ownership of the solution. The fourth important factor is that there needs to be realistic expectations of the amplification process. The patient needs to enter into the hearing aid adoption process with a positive attitude towards the concerned amplification.

Through this study, it becomes important to understand the psychological effects of social stigma about hearing loss. It is amply clear now that some negative stereotypes and prejudices are attributed to people with hearing loss. As mentioned before, the general population perceives individuals with hearing loss as being old" and "cognitively diminished". They are also perceived as "poor communication partners" and "uninteresting". Individuals who develop hearing loss as adults face stigma. (Hindhede, 2012, pp. 169-185).

People with hearing loss see deafness in the same stereotyped and discriminatory ways as the broader public. They are seen by society as having distinct perspectives on hearing loss. Stigmatization is a widespread phenomenon in Western society. This kind of stigmatization develops within people with negative psychological problems related to hearing loss (Hetu, 1996).

It is evident that hearing loss can occasionally go undiagnosed. As a result, people could decide to hide, downplay, or dispute their hearing loss. There are several ways to hide hearing loss from other people. People often perceive themselves as being stigmatized and isolate themselves from the rest of the world accordingly. When they do so, they avoid responding appropriately when people interact with them. At times, when the hearing loss must be concealed, it prevents people from using the right communication strategies and disclosing the presence of hearing loss (Gupta, 2018).

There are significant cognitive and emotional resources that affect hearing loss on communication. An individual's physical and psychological well-being are significantly impacted by excessive stress. This leads to a decline in overall quality of life, which might be the root cause of several health problems (Goyal, Agarwal and Tripathi, 2019, pp. 37-44 ) .

It is important to recognize and comprehend that one of the biggest barriers to audio logic rehabilitation is the stigma attached to hearing loss. When someone denies they have hearing loss, their problems become more difficult to detect, making it crucial to contact an audiologist. Thus, individuals are deprived of potentially helpful rehabilitation services, and such people need to obtain Hearing aids and other hearing

assistive technologies (HATs) at the same time. There are various case studies taken into consideration for people wear hearing aids and suffer from hearing loss.

The associated stigmas and related attitudes are well understood by these people. Such individuals need to resort to the best communication strategies that are known to be effective. These people should constantly be taken into consideration as they need to enhance their communication abilities and participate more (Gleitman et al, 1993, pp. 16-16).

Research studies define "stigma" as a quality or feature that is undervalued in a certain social setting. Numerous sociological perspectives have been studied in relation to stigma. Many research are conducted in an effort to ascertain the reasons for certain people's biased and stereotypical opinions of subgroups that display specific characteristics. It is frequently discovered that stigmatization entails a power dynamic between a minority group of individuals (referred to as "the insiders") and a dominant group of individuals (referred to as "the outsiders") who frequently differ from each other by some devalued trait. It is important to investigate the relationship between insiders and outsiders relative to their social stigmatization. Various investigations are taken into consideration to study the attitudes, beliefs, and behaviors of people who have been stigmatized due to their hearing loss. Understanding the societal factors that contribute to stigma is crucial.

There are studies of the perceptions, beliefs, and attitudes of people which reveal their similarities and differences in perceptions. It is very important to understand the literal meaning of ‘stigmatization’ with regard to hearing loss (Giossi , et al, 2019).

In relation to the stigma about hearing loss, two characteristics are worthy of discussion about hearing loss. The term “society” needs to be understood from a sociological perspective. Many attributes are stigmatizing, and negative connotations are always tagged with them. A society's collective ideals and views are referred to as stigmatizing qualities. There will eventually be less negative implications attached to those who portray hearing loss as society's attitudes become less conservative.

There is another significant social stigma issue that has to do with hearing loss. It is widely accepted that different facets of social stigma can vary depending on how stigma is defined and how an individual chooses to hide. Having this stigma has some advantages as well as disadvantages (Al Asheq and Hossain, 2019).

Individuals who frequently face this stigma do not only talk about it to get over it. It is impossible to hide the fact that hearing loss is an invisible disability from other people. According to social stigma studies, there are benefits and drawbacks for stigmatized individuals that should be carefully considered. An individual has the choice of disclosing the other person's identity to them or not (Extremera et al, 2020, pp .109-710; Genc et al, 2019).

Numerous studies have shown little correlation between the desire to conceal a stigma and the value assigned to the stigmatizing characteristic. The greater the number of negative stereotypes, the more attributes of hearing loss are and there is hearing impairment from others. The person who is stigmatized is more likely to be conscious of the perceptions that his friends, family, and coworkers hold of him. Understanding the stigmatization process requires political diplomacy. Utilizing similar techniques and being near those who stigmatize hearing loss might be less upsetting (Al Mamun, 2018; Foss, 2014).

Based on the literature review, there are various stigmas attached to hearing impairment. There is too much stress on this person as he has a feeling of incompetence and lack of social identity and social esteem which needs to be diminished. Many people in this category have made the decision to withdraw from society and cease engaging in social interactions. Hearing loss has a major detrimental impact on a person's sense of self and social identity (Al-Henzab et al, 2018). Through the model of the stigmatization process given by (Hetu ,1996), stigmatizing attitudes about hearing loss can lead to stress, anxiety, concealing, withdrawal as well as isolation from society. Meeting and interacting with individuals who have hearing loss is the first step in the normalization process for stigmatization. This allows them to discuss their positive experiences and the ensuing negative social interactions. They understand that sentiments of inadequacy and self-deprecation are common among

hearing-impaired persons. The normalization process is triggered by a variety of realizations.

When stigmatization is removed, people cope normally and behave normally in the presence of others (Appiah-Nimo and Chovancová, 2020, pp. 780-787).

The stigmatization process has a variety of effects. People deal with stress in different ways when they are faced with identity threats. The goal of the coping mechanisms is to bring the body's emotional equilibrium back. Some coping strategies could simply not function since they might occasionally have negative consequences. Using coping methods can have positive, negative, or neutral effects. Different coping strategies may have different outcomes at different levels. When a person tries to conceal their hearing loss in any given situation, they are not able to express themselves well (Arifin, 2018, pp. 30-33).

In literature research studies, many participants are stigmatized and are considered abnormal due to their hearing loss. The individuals who display these traits or characteristics are devalued and discredited from society. Any trait or attribute that brings discredit to the individual is considered a stigma. Such people are less valued in society. Social stigma within the society may also stem from a number of personal traits. Threats based on discrimination are directed against these marginalized persons. Many times, people assume that hearing loss is a bad thing. It is frequently misinterpreted as a personality disorder or intellectual difficulty (Erler and Garstecki, 2002).

As per the description given above, social stigma due to hearing loss calls for a stringent discussion. According to sociology, a “society” is a collection of individuals who have come together to create a community. People with hearing loss are generally termed as being negative to society. Attitudes currently associated with hearing loss tend to be negative and discriminatory, and they may evolve over time. Such people are less conservative, and they believe that the negative connotations associated with hearing loss will subside with time (Arksey and O’Malley, 2005, pp. 19-32).

One more important social stigma concern pertaining to hearing loss is this one. Within the social sciences, it is widely accepted that the many dimensions of social

stigma can vary according to an individual's ability to hide the trait that characterizes their stigma. When a person with hearing loss feels inferior to others with whom he interacts, he may occasionally hide his identity. There are benefits to this stigma associated with hearing loss as well as drawbacks. People who have hearing loss stigma mostly believe in concealing or hiding their identity as they are conscious of it. In other words, these people who have hearing loss do not want to reveal to other people that they have this deficiency (Azeem , et al, 2020, pp. 1291-1308)

There is a disadvantage to hiding a stigmatizing mindset, which is that these individuals are inherently uncomfortable. People who engage in social engagement experience some stress and social connection is highly valued. People with hearing loss are more likely to cause communication breakdowns in most social contexts because of their hearing impairment. They face the danger of disclosing stigmatizing traits to other people. They always think that this is a safe tactic, therefore they don't hesitate to tell others who are close to them about their stigma (Bahari , 2010, 52(1)).

The manner the stigma is communicated and when it is presented will affect how well others perceive this information, according to the results of literature reviews. People who are stigmatized are frequently perceived as dishonest or untrustworthy. There is a chance that people may view admission as evidence of one's social ineptitude and stupidity.

The greater the number of negative stereotypes, the more is the person stigmatized by his family members, friends, and workmates about the trait of hearing loss. People are more likely to voice their opinions about a characteristic in a polite and politically acceptable manner when it is stigmatized. It’s critical to comprehend how hearing loss should offer valuable perspectives on how to communicate this to those in close proximity. For example, a person who has hearing loss may decide to tell someone who is less prejudiced against them about their problem. By using repair techniques during talks, a person with hearing loss frequently reduces his self-esteem. With the help of this technique, the person with hearing loss can boost his or her confidence and self-esteem with their communication partner. When this state arises, using techniques with those who have more stigmatizing beliefs about hearing loss becomes less distressing.

It is important to recognize and acknowledge that individuals with hearing loss or difficulties experience stigmatizing attitudes and behaviors. This causes people to hide from society, withdraw from it, and experience a great deal of worry and anxiety (Baker and Welter, 2018, pp. 357-426).

It is essential to investigate how hearing loss affects social identity and self-esteem. Individuals with hearing loss are urged to choose communication partners who share their condition and use techniques to maximize information sharing. Participation leads to greater satisfaction and increases the hearing-impaired person's confidence in his ability to communicate effectively with his communication partner. Most audiologists benefit from people having this stigma at a contemporary level and suffer from hearing loss. Developing rehabilitative programs for those who report hearing loss and face stigma requires a fuller knowledge of this process of self-stigmatization. A thorough understanding of the stigma-induced identity threat paradigm is necessary. According to the literature reviews, Major and her associates have put out a model of stigma that is predicated on two ideas. The first premise is that the stigma increases the likelihood that the person's social identity will be threatened. According to the second assumption, a person's social identity is undervalued, which might result in a stressful circumstance (Colgan and Maxwell, 2019).

There are certain responses to stigmatization wherein the responses of a person may occur in a stressful situation. According to this framework, a person's attitude to stigmatization might vary depending on how they perceive the requirements of a certain circumstance (Coy, 2019, pp. 71-77).

Major and O'Brien present a conceptual framework that outlines the components of the stigma-induced identity threat. According to this paradigm, assessments of identity danger are influenced by environmental clues, individual traits, and communal representations. This leads to involuntary and voluntary responses to stress and the resulting outcome thereafter (Epstein and Salinas, 2018, pp. 61-91).

It is observed that people with hearing loss are often aware of the stereotypical representations that society holds, and the concerns of hearing loss need to be well

understood. Some people understand that these prejudices are being diagnosed and that this is resulting in a devastating situation of utter stigmatization (Doern, Williams, and Vorley, 2019, pp. 400-412).

It is crucial to remember that hearing impairment marks the start of the first stage of the normalization process. In order to improve the social image of the person with hearing loss, a high identity threat is likely to be triggered in these people. There are a number of situational cues that relate to the social and physical context in which they must do the task at hand. the knowledge that, depending on the social and physical context of an activity, a person with hearing loss may face different levels of identity hazard. The same reactions would be used in circumstances when there is a greater threat.

Different characteristics of people influence how seriously identity threats are evaluated. This covers a person's age, gender, employment, confidence level, attitudes, motivation, and the weight they place on their self-esteem levels as well as whether or not they focus on control and have a stigma consciousness level. People's opinions toward members of stigmatizing groups differ, which helps to identify hearing loss. As previously stated, persons with this type of hearing loss frequently hide their identities, which is unacceptable (Cienkowski and Pimentel, 2001, pp. 289-295).

It needs to be noted and well understood that Identity threat assessments are judgments of one's identity done by the stigmatized individual. Identity risks caused by stigma can be automatic, rapid, and occur outside of consciousness. The several reactions to the identity risk that are addressed here must always be kept in mind (Chatzoglou and Chatzoudes, 2017, pp. 44-69).

Various coping strategies need to be dealt with which reduce stress caused by an identity threat. The readers are more interested in the information about coping and stress related to hearing loss. It needs to be understood well that the word "coping" refers to a person's efforts to manage their thoughts, feelings, behavior, psychology, and a variety of other facets of their existence. The coping responses may be classified as emotion-focused, or problem-focused. It needs to be noted and well understood that a person with hearing loss tends to join a self-help group to ease the

feelings of being distraught and disappointed (Gagné e al. 2009, pp.98). It needs to be noted and well understood that people with contemporary stigmas related to hearing loss have lowered self-esteem, which is well discussed in this study. The outcomes of stigmatization also need to be understood well. The outcomes of the related strategies are repercussions for the individual at the emotional, physiological, psychological, and behavioral levels. When a person tries to counselors/her identity related to hearing loss, they are not able to express themselves well in each situation.

It is important to recognize and comprehend the danger that stigma poses to an individual's identity. Identity risks have an impact on a person's coping mechanisms. Research has demonstrated that academic results, clinical and personal stories, and academic findings all point to the stigma associated with heat loss as a roadblock to recovery.

Government does not extend its support to create awareness to extent it should through various agencies. These agencies need to support NGOs and hearing aid clinicians by providing platforms and providing funds to create awareness to overcome this stigma. Government policies should be strong and useful so Hearing impaired are encouraged to buy and wear Hearing aids to improve their life style.

# CHAPTER VI

# CONCLUSION

## 6.1 Summary

More observational methods are needed to fully understand the stigmatization process related to Hearing aids. Both qualitative and quantitative approaches were employed in the research study that reviewed the studies. The most effective study was conducted using surveys, interviews, and questionnaires. Every related study focused on participant perspectives, perceptions, and experiences related to the stigma attached to wearing Hearing aids. Studies examining the social factors behind stigmatization were insufficient. Several studies have shown how stigma negatively affects people's use of assistive technologies. Through this study, various implications for rehabilitation were understood. When there is low adherence to Hearing aids, it relates to fear of stigma related to Hearing aids and hearing impairment. It is also understood well that stigmatization is a social process that should include partners and relatives of impaired individuals in discussions about hearing aid rehabilitation. Hearing impairment professionals should advise about how to deal with this stigma to patients as well as spouses or other relatives.

## 6.2 Implications

Much more research using observational methods are required to comprehend the stigmatization process associated with Hearing aids. To find the most effective strategies for reducing stigma as a social and relational phenomenon, further research is needed. The study states that stigmatization is a social process that impacts persons with hearing loss in their interactions with their social environment. This knowledge is currently widely held. It would be beneficial to provide guidance to specialists in this field about how to handle inquiries regarding Hearing aids, hearing impairment, and the stigma associated with them (Bleiker et al, 2019, pp. S4-S8.).

Due to their difficulty communicating, people with hearing loss typically have fewer educational and employment options. Because they have less access to resources and find it harder to interact with others, they also frequently experience

social disengagement. Emotional issues can also arise from a decline in self-worth and confidence.

Based on our examination of various studies, most of the studies examined self-stigma, public stigma as well as stigma in the general population. Psychological reactions of people about the social stigma of Hearing aids were well understood. Nearly all the included studies were descriptive and there was no conceptual framework that was applied. In this study, the dimensions of existing stigma about Hearing aids were well understood (Cash et al, 2022, pp. 101077).

### 6.3 Recommendation for Future Research

The study's future directions suggest that giving the questionnaire to patients in a large clinical setting would be optimal. It's important to completely understand their behavior and to compile data on hearing aid users and non-users alike (Brooks and Hallam 1998, pp. 217-226).

The current study's positive results were made possible by the questionnaire survey's small sample size, but they still require application at the clinical level. The questionnaires included a wide variety of questions, many of which required careful observation. It is advised to do follow-up research with a bigger sample size in order to validate the provided questionnaire survey.

### 6.4 Conclusion

The majority of the research that made up our review was predicated on stigmatizing beliefs about Hearing aids and hearing loss because they lacked a theoretical foundation. It's also critical to comprehend common misconceptions regarding hearing loss and assistive technology. "Old age," "less communication," "being perceived as deaf," "being perceived as cognitively disabled," "looking disabled," "looking less confident," "feeling lonely and embarrassed," "feeling weak and feeble," and many other stereotypes were most often linked to Hearing aids. Understanding the relationship between these changing perspectives and the stigmatizing behaviors that older adults with hearing loss frequently endorse is

crucial. The most common stigmatizing behaviors were denying reality and withdrawing from social relationships (Cecez-Kecmanovic et al, 2020, p. 1.).

According to the secondary study, social identity and the stability of social connections are seriously threatened by having a hearing disability. Examining how stigma around hearing loss affects help-seeking behaviors is crucial, as evidenced by the fact that respondents often seek assistance after experiencing the denial and social stress associated with their hearing loss.

During this study, work was done closely with agencies attached to the hearing industry as well as hearing clinics doing fittings of Hearing aids. Very few clinics work hand in hand with government agencies as well NGOs who need to organize camps in rural areas as well as schools and colleges to create awareness, so this social stigma is no more a hindrance for the hearing impaired in their social growth.

It is also important to understand the limitations of study. The sample size of the current study was small and there was a small group of respondents and participants. Such a study has 95% confidence and about 5% margin of error. This is a very important limitation of the study and needs to be noted well. The results of the study are encouraging and should be interpreted with caution. Another limitation of the study was that it was difficult to obtain every respondent's demographic information, audiogram, hearing aid status, and access to verifiable data. There is no way to ascertain the hearing status and demographic information of a person.

## APPENDIX A

## A QUESTIONNAIRE TO DEPICT PERSPECTIVES ON HEARING AIDS

Ques-1: Are you willing to take part in this survey?

- Yes
- No.

Ques-2: How old are you now?

Ques-3. Which gender are you?

- Male
- Female

Ques-4. Do you believe you may have hearing loss?

- Yes
- No

Ques-5: For what duration have you been experiencing hearing loss?

- Not relevant
- Less than a year
- one to five years
- six to ten years

more than ten yearsQues-6: Do you have any hearing aids at the moment?

- Not relevant
- I do use them, and I do own them.
- Although I possess them, I never use them.
- Although I have hearing loss
- I don’t have a hearing aid.

Ques-7. What is the duration of your use of hearing aids?

- Not relevant
- Less than six months
- three to six years
- three to six years
- more than six years

**SECTION-2**

Here, it would be shown a short statement of your views and opinions about Hearing aids. Below this statement, A 10-point rating system will be used to indicate whether you agree or disagree with the statement. Please tick the box that corresponds to your level of agreement or disagreement with the statement.

Ques-1: Are you willing to take part in this survey?

- Yes
- No.

Ques-2: How old are you now?

Ques-3. Which gender are you?

- Male

Female

Ques-4. Do you believe you may have hearing loss?

- Yes
- No

Ques-5: For what duration have you been experiencing hearing loss?

- Not relevant
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- more than ten years

Ques-6: Do you have any hearing aids now?

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- I do use them, and I do own them.
- Although I possess them, I never use them.
- Although I have hearing loss
- I don't have a hearing aid.

Ques-7. What is the duration of your use of hearing aids?

- Not relevant
- Less than six months
- three to six years
- three to six years
- more than six years

**SECTION-2**

Here, it would be shown a short statement of your views and opinions about hearing aids. Below this statement, there shall be a rating scale to showcase Using a 10-point rating system, indicate whether you agree or disagree with the statement. Please tick the box that corresponds to your level of agreement or disagreement with the statement.

Q-1A. I feel that the current hearing aid styles and discreet and small.

Agree Disagree

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-1B What could you do based on the response to your earlier statement?

The most covert hearing aid is what I would purchase. Not purchase the most covert hearing aid available.

2. 3. 4. 5. 6. 7. 8. 9. 10

Q.2A If I resort to a hearing aid, people will perceive me as being stupid.

Strongly Agree Strongly Disagree

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-2 B. In light of the response above, what would you do?

Don't ever buy the hearing aid. Regardless of the opinions of others, I would buy the hearing aid.

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-3 A. I don't think I need a hearing aid of any type because I can handle my hearing loss.

Totally accurate Not true at all

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-3B. Based on your above answer, what action do you want to take?

Consider using a hearing aid. Don't attempt wearing a hearing aid.

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-4A. As per what I have heard from people within my network, What would you do?

Accept a hearing aid trial period. Never agree to a hearing aid trial period.

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-5A. I'm not particularly concerned about my hearing impairment right now.

Yes, I do believe in this. No, I do not.

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-5B. Based on the above answer, What would you do?

Never would I attempt a hearing aid. I'd absolutely give a hearing aid a try.

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-6A. Using a hearing aid, in my opinion, will fully restore my hearing.

Yes. I do not believe in this at all.

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-6B. In light of your response above, what would you do?

Don't attempt wearing a hearing aid. Consider using a hearing aid.

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-7A. It would indeed be embarrassing if I resorted to a hearing aid.

Absolutely agree Absolutely disagree

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-7B. Based on your above answer, what action is needed?

Never put on a hearing aid. Wearing a hearing aid

Q-8A. A hearing aid is not something I desire.

I definitely feel this way. Don't feel this way at all.

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-8B What would you do based on your response above?

Refrain from purchasing a hearing aid. I wouldn't forego purchasing a hearing aid.

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-9A I use hearing aids to please people around me / or someone in my network (friend, spouse, family member)

Absolutely true Absolutely false

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-9B Based on your above answer, What would you do?

To win someone over, use a hearing aid. Never try a hearing aid only to win someone over.

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-10A Considering the assessment for hearing aids is not just important.

Strongly believe Strongly do not believe

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-10B Based on the above answer, what action will you consider?

Never have your hearing aid needs evaluated. Be evaluated for a hearing aid without a doubt.

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-11 A. I think people react differently when you wear a hearing aid.

Absolutely true Absolutely false

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-11B As per the above answer, what action will you consider?

I'm not going to test a hearing aid. Without a doubt, I would test a hearing aid.

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-12A. I would stand out in a crowd if I had to wear a hearing aid.

Totally accurate. Completely untrue

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-12B. Based on the above answer, What will you think about doing?

I do things to stand out from the herd, yet. I never want to do things that draw attention to myself.

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-13A. When you use a hearing aid, people stigmatize you or are unsure of how to respond to you.

Totally accurate Completely untrue

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-14A. I believe I might benefit from wearing a hearing aid.

Totally accurate. Don't believe this to be real.

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-14B Based on your above statement, What would you think of doing?

Never would I attempt a hearing aid. Would consider using a hearing aid

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-15A. Although I'm ready to give it a try, I don't think the hearing aid will be very helpful.

Totally accurate. Completely untrue

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-15B. What course of action would you take in light of your response above?

I would believe in the potential of hearing aids. Hearing aids are not given a chance to function.

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-16A. It will take weeks or months, in my opinion, to become accustomed to using hearing aids.

I really believe this to be true. I firmly believe that this is untrue.

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-16B. Based on your above answer, what action do you wish to consider?

Lot of effort needed to get used to hearing aid  Will be easy to get used to hearing aid

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-17A Although I think I don't have really poor hearing, I think I need a hearing aid.

I wholeheartedly concur.  I strongly disagree

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-17B. Based on the above answer, what action do you wish to consider?

I refuse to buy a hearing aid.  Would buy a device for hearing.

2. 3. 4. 5. 6. 7. 8. 9. 10

Q-18A. Resorting to a hearing aid would make me look old.

Yes, absolutely  I don't feel this way.

2. 3. 4. 5. 6. 7. 8. 9. 1

Q-18B What course of action might you take in light of your response to the question above?

Avoid getting evaluated for a hearing aid.  Try being evaluated for a hearing aid.

2. 3. 4. 5. 6. 7. 8. 9.

Your Input Is Highly Appreciated.

Thank You for Your Response and for Taking Time out for This Survey.

## APPENDIX B

## QUESTIONNAIRE: ATTITUDES TOWARD LOSS OF HEARING: YES/NO RESPONSE FORMA

1. Do you feel older when you use hearing aids? Y/N
2. How frequently do you move out compared to before you got hearing loss? Y/N
3. Do you feel inferior, different, or unable because of your hearing loss? Y/N
4. Do you worry that using hearing aids would draw attention to you? Y/N
5. Do you find the idea of using hearing aids appealing? Y/N
6. Do people in your network get frustrated or angry due to your hearing difficulties? Y/N
7. Do people comment about your hearing loss or hearing difficulty, and do you feel unhappy about it? Y/N
8. Do those around you think hearing aids are dumb? Y/N
9. Do remarks regarding your hearing make you feel offended? Y/N
10. Do you believe that because of your hearing issues, people neglect you all the time?
11. Do you feel as confident as you did when your hearing was normal?
12. Do you think as fast as you did before to your hearing impairment?
13. When there is the loudness of television, do you often get into arguments?
14. Do your family and friends often ask you to listen harder?
15. Do you believe that your family and friends find it difficult to communicate with you because of your hearing issues?
16. Do you interact with others less because of your hearing loss?
17. Do your hearing issues force you to shy away from casual talk?
18. Do your hearing issues cause you to avoid social situations?
19. Are you as gregarious and chatty as you were before to your hearing impairment?

20. Do you stop listening to crucial talks when there are a lot of people talking?
21. Do you remain silent during a discussion out of concern that you might say something incorrectly?
22. Do your friends and family understand your hearing problems?
23. Due to your loss of hearing, do you feel you are missing out on important sounds such as the rain and birds singing?
24. What best describes your hearing loss?

    No serious problem

    Can overcome the difficulty.

    A burden indeed

## APPENDIX C

## DEPICTING ATTITUDES OF PEOPLE FOR HEARING LOSS AND USING HEARING AIDS

1. ANSWERS:
2. I feel depressed, very often, when I do not follow a conversation.
3. I have been pressured for being assessed for hearing loss.
4. I would get used to hearing aids in a matter of a few days.
5. The hearing aids that go behind the ear are inconspicuous and small
6. If I resort to hearing aids, people will tag me as being stupid.
7. Due to impaired hearing, I fear meeting new people.
8. Through my efforts, I believe I have already overcome my hearing difficulties.

From what I know, it is of no great help to use hearing aids.

9. I feel inadequate and incapable due to my poor hearing abilities.
10. My difficulty in hearing is not of any major concern to me at the moment.
11. I hear easily with hearing aids as much as I did before.
12. It embarrasses me to resort to a hearing aid.
13. I am using hearing aids in order to please someone else.
14. I do not want a hearing aid.
15. It is not important to be assessed for a hearing aid.
16. Due to my hearing aid difficulty, I avoid company as I find conversations to be too difficult.
17. I feel people react differently when a hearing aid is used by you.
18. When you have difficulties in hearing, you are often ignored by other people.
19. In a group following conversations, I often keep quiet so that I do not utter a wrong thing.
20. If I resort to a hearing aid, I will often stand out in a crowd.

21. I perceive that because of my hearing difficulty, I see myself as less of a person.
22. Whatever hearing difficulties I have, I see it is a problem not bothering much about.
23. When you use a hearing aid, many people just do not know how to react towards you.
24. Many people perceive you as being stupid when you use a hearing aid.
25. Due to my hearing difficulty, when several people are chatting, it concerns me that I often lose the thread of my conversation.
26. I am having my hearing assessed due to pressure from my family and friends.
27. Due to my hearing difficulty, I feel that other people find it a strain to talk to me.
28. I believe sincerely that hearing is not a serious problem for me.

Wearing a hearing aid would help me when I meet strangers.

29. I think that when you are wearing a hearing aid, people often tend to ignore you.
30. When I realize that I have got the wrong stick in the conversation, it really upsets me.
31. I want to try a hearing aid, but I don't think it will be of any help to me.
32. It would take some weeks and months to get used to hearing aids.
33. I feel that people avoid me when I have hearing difficulty.
34. I feel that my hearing problems are quite minor.
35. By and large, I believe that I'm able to hear without any difficulty.
36. I feel that my hearing is not so bad, but I really need a hearing aid.
37. I feel isolated due to my hearing loss, from people around me.
38. I feel older when I resort to hearing aids.
39. Deep down, I really feel restricted due to my hearing loss.

## BIBLIOGRAPHY


Al Asheq, A., and Hossain, M. U. (2019) 'SME performance: Impact of market, customer, and brand orientation', *Academy of Marketing Studies Journal*, *23*(1), pp. 1-9.

Alsayed, A. K. (2021) 'Social-Emotional Experiences for Young Male Adults who are Deaf or Hard of Hearing in the Eastern Province of Saudi Arabia'.

Alshehri, K. A., Alqulayti, W. M., Yaghmoor, B. E., and Alem, H. (2019) 'Public awareness of ear health and hearing loss in Jeddah, Saudi Arabia', *South African Journal of Communication Disorders*, *66*(1), pp. 1-6.

Appiah-Nimo, C., and Chovancová, M. (2020) 'Improving firm sustainable performance: the role of market orientation', In *Proceedings of The International Conference on Business Excellence* (Vol. 14, No. 1, pp. 780-787).

Archana, G., Krishna, Y., and Shiny, R. (2016) 'Reasons for nonacceptance of hearing aid in older adults', *Indian Journal of Otology*, *22*(1), pp. 19-23.

Arifin, S. R. M. (2018) 'Ethical considerations in qualitative study', *International Journal of Care Scholars*, *1*(2), pp. 30-33.

Arksey, H., and O'malley, L. (2005) 'Scoping studies: towards a methodological framework', *International Journal of Social Research Methodology*, *8*(1), pp. 19-32.

Azeem, M. U., Bajwa, S. U., Shahzad, K., and Aslam, H. (2020) 'Psychological contract violation and turnover intention: The role of job dissatisfaction and work disengagement', *Employee Relations: The International Journal*, *42*(6), pp. 1291-1308.

Bahari, S. F. (2010) 'Qualitative versus quantitative research strategies: contrasting epistemological and ontological assumptions', *Sains Humanika*, *52*(1).

Baker, T., and Welter, F. (2018) 'Contextual entrepreneurship: An interdisciplinary perspective', *Foundations and Trends® In Entrepreneurship*, *14*(4), pp. 357-426.

BenSaleh, M. S., Saida, R., Kacem, Y. H., and Abid, M. (2020) 'Wireless sensor network design methodologies: A survey', *Journal of Sensors*, *2020*, pp. 1-13.

Berndt, A. E. (2020) 'Sampling methods', *Journal of Human Lactation*, *36*(2), 224-226.

Bhardwaj, P. (2019) 'Types of sampling in research', *Journal of Primary Care Specialties*, *5*(3), pp. 157-163.

Bleiker, J., Morgan-Trimmer, S., Knapp, K., and Hopkins, S. (2019) 'Navigating the maze: Qualitative research methodologies and their philosophical foundations', *Radiography*, *25*, S4-S8.

Brooks, D. N. (1989) 'The effect of attitude on benefit obtained from Hearing aids', *British Journal of Audiology*, *23*(1), pp. 3-11.

Brooks, D. N., and Hallam, R. S. (1998) 'Attitude to Hearing Diffculty and Hearing aids and the Outcome of Audiological Rehabilitation', *British Journal of Audiology*, *32*(4), pp. 217-226.

Cash, P., Isaksson, O., Maier, A., and Summers, J. (2022) 'Sampling in design research: Eight key considerations', *Design Studies*, *78*, 101077.

Cecez-Kecmanovic, D., Davison, R. M., Fernandez, W., Finnegan, P., Pan, S. L., and Sarker, S. (2020) 'Advancing qualitative IS research methodologies: Expanding horizons and seeking new paths', *Journal of The Association for Information Systems*, *21*(1), 1.

Chatzoglou, P., and Chatzoudes, D. (2017) 'The role of innovation in building competitive advantages: an empirical investigation', *European Journal of Innovation Management*, *21*(1), pp. 44-69.

Chilisa, B. (2019). *Indigenous Research Methodologies*. Sage publications.

Chundu, S., Allen, P. M., Han, W., Ratinaud, P., Krishna, R., and Manchaiah, V. (2021) 'Social representation of Hearing aids among people with hearing loss: An exploratory study', *International Journal of Audiology*, *60*(12), pp. 964-978.

Cienkowski, K. M., and Pimentel, V. (2001) 'The hearing aid 'effect'revisited in young adults', *British journal of audiology*, *35*(5), pp. 289-295.

Colgan, A. D., and Maxwell, B. (2020). *The Importance of Philosophy in Teacher Education*. London: Routledge.

Coy, M. J. (2019) 'Research methodologies: Increasing understanding of the world', *International Journal of Scientific and Research Publications*, *9*(1), pp. 71-77.

Daniel, C. O. (2019) 'Analysis of quality work life on employee's performance', *International Journal of Business and Management Invention (IJBMI)*, *8*(2), pp. 60-65.

David, D., and Werner, P. (2016) 'Stigma regarding hearing loss and Hearing aids: A scoping review ', *Stigma and Health*, *1*(2), pp.59.

Doern, R., Williams, N., and Vorley, T. (2019) 'Special issue on entrepreneurship and crises: business as usual? An introduction and review of the literature', Entrepreneurship *and Regional Development*, *31*(5-6), pp. 400-412.

Doggett, S., Stein, R. L., and Gans, D. (1998) 'Hearing aid effect in older females', *Journal of The American Academy of Audiology*, *9*(5).

Dwarakanath, V. M., and Manjula, P. (2020) 'Influence of personality and attitude Towards loss of hearing-on-hearing aid outcome in older adults with hearing loss', *Indian Journal of Otolaryngology and Head and Neck Surgery*, 1-8.

Ekstrand, M. L., Bharat, S., and Srinivasan, K. (2018) 'HIV stigma is a barrier to achieving 90-90-90 in India', *The lancet HIV*, *5*(10), e543-e545.

Epstein, T., and Salinas, C. S. (2018) 'Research methodologies in history education', *The Wiley International Handbook of History Teaching and Learning*, pp. 61-91.

Erie, PA: Author. Trychin, S., (2003) c. 'Is that what you think?', (Rev. ed.).

Erie, PA: Author. Trychin, S., (2003) d. 'Living with hearing loss workbook ', (2nd Rev. ed.).

Erie, PA: Author. Trychin, S., (2003) e. 'Relaxation training workbook ', Rev. ed.).

Erie, PA: Author. Tye-Murray, N., (2002) 'Conversation made easy: Speechreading and conversation training for individuals who have hearing loss (adults and teenagers)'.

Erler, S.F. and Garstecki, D.C., (2002) 'Hearing loss-and hearing aid-related stigma'

Extremera, N., Mérida-López, S., Quintana-Orts, C., and Rey, L. (2020) 'On the association between job dissatisfaction and employee's mental health problems: Does emotional regulation ability buffer the link?', *Personality and Individual Differences, 155*, 109710.

Foss, K. A. (2014) '(De) stigmatizing the silent epidemic: representations of hearing loss in entertainment television', *Health Communication*, *29*(9), pp. 888-900.

Gagné, J. P., Jennings, M. B., and Southall, K. (2009) 'Understanding the stigma associated with hearing loss in older adults', *Hearing care for adults*, pp. 203-12.

Gagné, J. P., Southall, K., and Jennings, M. B. (2009) 'The psychological effects of social stigma: Applications to people with an acquired hearing loss', *Advanced practice in adult audiologic rehabilitation: International perspective*, pp. 63-92.

Gamanis, A., Anastasiadou, S., Giossi, S., and Gamanis, G. G. (2019) 'Tracing the concept of entrepreneurship and the role of an entrepreneur: A critical review'.

Gatehouse, S., Naylor, G., and Elberling, C. (2003) 'Benefits from Hearing aids in relation to the interaction between the user and the environment', *International Journal of Audiology, 42*(sup1), pp. 77-85.

Genc, E., Dayan, M., and Genc, O. F. (2019) 'The impact of SME internationalization on innovation: The mediating role of market and entrepreneurial orientation', *Industrial Marketing Management*, *82*, pp. 253-264.

Gleitman, R., Goldstein, D. P., and Binnie, C. A. (1993) 'Stigma of hearing loss affects attitudes about Hearing aids', *Hearing Instruments*, *44*, pp. 16-16.

Goyal, A. K., Agarwal, G., and Tripathi, A. K. (2019) 'Network architectures, challenges, security attacks, research domains and research methodologies in VANET: a survey', *International Journal of Computer Network and Information Security*, *11*(10), pp.37-44.

Granberg, S. (2015). *Functioning and disability in adults with hearing loss: The preparatory studies in the ICF Core sets for hearing loss project*. (Doctoral dissertation, Örebro university).

Gupta, S. (2018). *Driving digital strategy: A guide to reimagining your business*. Harvard Business Press.

Gusmerotti, N. M., Testa, F., Corsini, F., Pretner, G., and Iraldo, F. (2019) 'Drivers and approaches to the circular economy in manufacturing firms'*, Journal of Cleaner Production, 230*, pp.314-327.

Hankins, R.C., 2015 'Social interaction between deaf and hearing people'.

Heatherton, T. F. (Ed.). (2003). *The social psychology of stigma*. Guilford Press.

Hétu, R. (1996) 'The stigma attached to hearing impairment', *Scandinavian Audiology. Supplementum*, *43*, pp.12-24.

Hindhede, A. L. (2012) 'Negotiating hearing disability and hearing disabled identities', *Health: 16*(2), pp. 169-185.

Hisrich, R. D., and Soltanifar, M. (2021) 'Unleashing the creativity of entrepreneurs with digital technologies', *Digital Entrepreneurship: Impact on Business and Society*, pp. 23-49.

Hofmann, F. (2019) 'Circular business models: business approach as driver or obstructer of sustainability transitions?', *Journal of Cleaner Production*, *224*, pp.361-374.

Hogan, A., and Phillips, R. (Eds.). (2015). *Hearing impairment and hearing disability: towards a paradigm change in hearing services*. Ashgate Publishing Ltd..

Huang, S., Martin, L. J., Yeh, C. H., Chin, A., Murray, H., Sanderson, W. B., ..and Thoma, B. (2018) 'The effect of an infographic promotion on research dissemination and readership: a randomized controlled trial', *Canadian Journal of Emergency Medicine*, *20*(6), pp. 826-833.

Hürlimann, C., and Hürlimann, C. (2019) 'Research philosophy and ethics', *Valuation of Renewable Energy Investments: Practices among German and Swiss Investment Professionals*, pp. 111-126.

Iler, K. L., Danhauer, J. L., and Mulac, A. (1982) 'Peer perceptions of geriatrics wearing Hearing aids', *Journal of Speech, and Hearing Disorders*, *47*(4), pp. 433-438.

Ipek, I., and Bıçakcıoğlu-Peynirci, N. (2020) 'Export market orientation: An integrative review and directions for future research', *International Business Review*, *29*(4), 101659.

Iyer, P., Davari, A., Zolfagharian, M., and Paswan, A. (2019) 'Market orientation, positioning strategy and brand performance', *Industrial Marketing Management*, *81*, pp. 16-29.

Joensuu-Salo, S., Sorama, K., Viljamaa, A., and Varamäki, E. (2018) 'Firm performance among internationalized SMEs: The interplay of market orientation, marketing capability and digitalization' *Administrative sciences, 8(*3), 31.

Johnson, C. E., Danhauer, J. L., and Edwards, R. G. (1982) 'The ''hearing aid effect''on geriatrics—Fact or fiction ', *Hearing Instruments*, *33*(10), pp. 10-24.

Johnson, C. E., Danhauer, J. L., Gavin, R. B., Karns, S. R., Reith, A. C., and Lopez, I. P. (2005) 'The hearing aid effect (2005) : a rigorous test of the visibility of new hearing aid styles', *American Journal of Audiology*, *14*(2).

Kelly-Campbell, R., and Plexico, L. (2012) 'Couples experiences of living with hearing impairment', *Asia Pacific Journal of Speech, Language and Hearing*, *15*(2), 145-161.

Kochkin, S. (1990) 'One more time... What did the 1984 HIA market survey say', *Hearing Instruments, 41*(11), pp. 10-20.

Kochkin, S. (1994) 'MarkeTrak IV: Impact on purchase intent of cosmetics, stigma, and style of hearing instrument', *Hearing Journal, 47*, pp. 29-29.

Kochkin, S. (2007) 'MarkeTrak VII: Obstacles to adult non-user adoption of Hearing aids', The *Hearing Journal*, *60*(4), pp. 24-51.

Kochkin, S., (1993) 'Mark Track III: Why 20 million in US don't use Hearing aids for their hearing loss', *The Hearing Journal,* 46: pp. 20-27.

Kotby, M. N., Tawfik, S., Aziz, A., and Taha, H. (2008) 'Public health impact of hearing impairment and disability', *Folia phoniatrica et logopaedica, 60*(2), pp. 58-63.

Kricos, P. B. (2000) 'The influence of nonaudiological variables on audiological rehabilitation outcomes', *Ear and Hearing*, *21*(4), 7S-14S.

Kricos, P.B., Erdman, S., Bratt, G.W. and Williams, D.W., (2007). 'Psychosocial correlates of hearing aid adjustment', *Journal of the American Academy of Audiology*, 18(04), pp.304-322.

Lane, J.D. and Wegner, D.M., (1995) 'The cognitive consequences of secrecy', *Journal of personality and social psychology,* 69(2), pp..237.

Lazarus, R.S. and Folkman, S., 1984. *Stress, appraisal, and coping.* Springer publishing company.

Leary, M.R., Tambor, E.S., Terdal, S.K. and Downs, D.L., (1995) 'Self-esteem as an interpersonal monitor: The sociometer hypothesis', *Journal of personality and social psychology*, 68(3), pp..518.

Leedy, P. D., and Ormrod, J. E. (2019). *Practical research: Planning and design.* Pearson. One Lake Street, Upper Saddle River, New Jersey 07458.

Levin, S., and Van Laar, C. (Eds.). (2006). *Stigma and group inequality: Social psychological perspectives*. Psychology Press.

Lightsey Jr, O.R. and Barnes, P.W., (2007) 'Discrimination, attributional tendencies, generalized self-efficacy, and assertiveness as predictors of psychological distress among African Americans', *Journal of Black Psychology,* 33(1), pp.27-50.

Link, B.G. and Phelan, J.C., (2006) 'Stigma and its public health implications', *The Lancet*, 367(9509), pp.528-529.

Mafini, C. and Dlodlo, N.,( 2014) 'The relationship between extrinsic motivation, job satisfaction and life satisfaction amongst employees in a public organisation', SA *Journal of Industrial Psychology,* 40(1), pp.1-13.

Major, B. (2006) 'New perspectives on stigma and psychological well-being', In *Stigma and group inequality* (pp. 207-224). Psychology Press.

Major, B. and Gramzow, R.H., (1999)'Abortion as stigma: cognitive and emotional implications of concealment', *Journal of personality and social*

*psychology*, 77(4), pp..735.

Major, B., and O'brien, L. T. (2005) 'The social psychology of stigma', *Annu. Rev. Psychol.*, *56*, pp. 393-421.

Mamun, A. A., Mohiuddin, M., Fazal, S. A., and Ahmad, G. B. (2018) 'Effect of entrepreneurial and market orientation on consumer engagement and performance of manufacturing SMEs', *Management Research Review*, *41*(1), pp. 133-147.

Manchaiah, V., Danermark, B., Ahmadi, T., Tomé, D., Zhao, F., Li, Q., ... and Germundsson, P. (2015) 'Social representation of "hearing loss": cross-cultural exploratory study in India, Iran, Portugal, and the UK', *Clinical Interventions in Aging,* pp. 1857-1872.

Manchaiah, V., Danermark, B., Vinay, Ahmadi, T., Tomé, D., Krishna, R., and Germundsson, P. (2015) 'Social representation of Hearing aids: cross-cultural study in India, Iran, Portugal, and the United Kingdom', *Clinical interventions in aging*, pp. 1601-1615.

Masa'deh, R. E., Al-Henzab, J., Tarhini, A., and Obeidat, B. Y. (2018) 'The associations among market orientation, technology orientation, entrepreneurial orientation, and organizational performance', *Benchmarking: An International Journal*, *25*(8), pp. 3117-3142.

Michael, N., Zaman, M. and Gorpe, T.S., (2018). 'A case study of developing leadership and creativity skills in higher education (HE) students', *e-Review of Tourism Research*, 15(4/5).

Miller, C.T. and Kaiser, C.R., 2001 'A theoretical perspective on coping with stigma', *Journal of Social Issues,* 57(1), pp.73-92.

Miller, C.T. and Major, B., (2000), 'Coping with stigma and prejudice'.

Mulac, A., Danhauer, J.L. and Johnson, C.E., (1983) 'Young adults' and peers' attitudes towards elderly hearing aid wearers', *Australian Journal of Audiology,* 5(2), pp.57-62.

Naepi, S., (2019) 'Pacific research methodologies', In *Oxford research encyclopedia of education.*

Orji, A., Kamenov, K., Dirac, M., Davis, A., Chadha, S. and Vos, T., 2020 'Global and regional needs, unmet needs and access to Hearing aids', *International Journal of Audiology*, 59(3), pp.166

Orji, A., Kamenov, K., Dirac, M., Davis, A., Chadha, S. and Vos, T.,( 2020) 'Global and regional needs, unmet needs and access to Hearing aids', *International Journal of Audiology*, 59(3), pp.166-172.

Ortiz-Castillo, J. E., Gallo-Villanueva, R. C., Madou, M. J., and Perez-Gonzalez, V. H. (2020). 'Anisotropic gold nanoparticles: A survey of recent synthetic methodologies', *Coordination Chemistry Reviews*, *425*, 213489.

Pachankis, J.E., (2007) 'The psychological implications of concealing a stigma: a cognitive-affective-behavioral model', *Psychological bulletin,* 133(2), pp..328.

Pinel, E.C., 1999 'Stigma consciousness: the psychological legacy of social stereotypes', *Journal of personality and social psychology,* 76(1), pp..114.

Psomas, E., 2021 'Future research methodologies of lean manufacturing: a systematic literature review', *International Journal of Lean Six Sigma*, 12(6), pp.1146-1183.

Quinn, D. M. (2006) 'Concealable versus conspicuous stigmatized identities', In *Stigma and group inequality*,(pp. 97-118). Psychology Press.

Rabe, M., Milz, S., and Mader, P. (2021) 'Development methodologies for safety critical machine learning applications in the automotive domain: A survey', *In Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition* (pp. 129-141).

Ramos, E., and Concepcion, B. P. (2020, May) 'Visual abstracts: redesigning the landscape of research dissemination'*, In Seminars in nephrology* (Vol. 40, No. 3, pp. 291-297). WB Saunders.

Rawool, V., 2018 'Denial by Patients of Hearing Loss and Their Rejection of Hearing Health Care: A Review', *Journal of Hearing Science*, 8(3).

Ritter, C. R., Barker, B. A., and Scharp, K. M. (2020) 'Using attribution theory to explore the reasons adults with hearing loss do not use their Hearing aids', *PLoS One,* 15(9), e0238468.

Roots, J. (1999) *Politics of visual language: Deafness, language choice, and political socialization*. McGill-Queen's Press-MQUP.

Ruusuvuori, J. E., Aaltonen, T., Koskela, I., Ranta, J., Lonka, E., Salmenlinna, I., and Laakso, M. (2021) 'Studies on stigma regarding hearing impairment and hearing aid use among adults of working age: a scoping review', *Disability and rehabilitation*, *43*(3), pp. 436-446.

Smart, L. and Wegner, D.M., (1999) 'Covering up what can't be seen: concealable stigma and mental control', *Journal of personality and social psychology*, 77(3), p.474.

Smith, S. L., and West, R. L. (2006) 'The application of self-efficacy principles to audiologic rehabilitation: A tutorial'.

Snyder, C. R., and Forsyth, D. R. (1991). *Handbook of social and clinical psychology: The health perspective*. Pergamon Press.

Southall, K., Gagné, J. and Jennings, M., (2010) 'Stigma: A negative and a positive influence on help-seeking for adults with acquired hearing loss', *International Journal of Audiology*, 49(11), pp.804-814.

Southall, K., Gagné, J.P. and Beth Jennings, M.,(2009) 'CONTRIBUTED PAPERS-The Application of Stigma-Induced Identity Threat to Individuals with Hearing Loss '*JARA-Journal of the Academy of Rehabilitative Audiology,* 42, pp.11.

Southall, K., Gagné, J.P. and Jennings, M.B., (2010) 'Stigma: A negative and a positive influence on help-seeking for adults with acquired hearing loss*', International Journal of Audiology*, 49(11), pp.804-814.

Southall, K., Jennings, M.B. and Gagné, J.P., (2011) 'Factors that influence disclosure of hearing loss in the workplace ', *International Journal of Audiology,* 50(10), pp.699-707.

Steele, C. M., Spencer, S. J., and Aronson, J. (2002) 'Contending with group image: The psychology of stereotype and social identity threat', *In Advances in experimental social psychology* (Vol. 34, pp. 379-440). Academic Press.

Steele, C.M. and Aronson, J., (1995) 'Stereotype threat and the intellectual test performance of African Americans', *Journal of Personality, and social psychology*, 69(5), pp..797.

Steele, C.M., (1997) 'A threat in the air: How stereotypes shape intellectual identity and performance ', *American Psychologist*, 52(6), pp.613.

Steward, W. T., Chandy, S., Singh, G., Panicker, S. T., Osmand, T. A., Heylen, E., and Ekstrand, M. L. (2011) 'Depression is not an inevitable outcome of disclosure avoidance: HIV stigma and mental health in a cohort of HIV-infected individuals from Southern India', Psychology*, health and medicine*, *16*(1), pp.74-85.

Sulabha, M.N., Mahendra, S.N. and Akriti, S., (2013) 'Rehabilitation of hearing impaired children in India-An update', *Online Journal of Otolaryngology*, 3(1), pp.20.

Swim, J. K., and Thomas, M. A. (2006) 'Responding to everyday discrimination: A synthesis of research on goal-directed, self-regulatory coping behaviors*', In Stigma and group inequality* (pp. 119-140). Psychology Press.

Takahashi, G., Martinez, C. D., Beamer, S., Bridges, J., Noffsinger, D., Sugiura, K., and Williams, D. W. (2007) 'Subjective measures of hearing aid benefit and satisfaction in the NIDCD/VA follow-up study', *Journal of the American Academy of Audiology,* 18(04), 323-349.

Taneja, M.K., (2014) 'Deafness, a social stigma: Physician perspective', *Indian Journal of Otolaryngology and Head and Neck Surgery,* 66, pp.353-358.

Tapper, E.B., Mirabella, R., Walicki, J.J. and Banales, J.M., (2021) 'Optimizing the use of twitter for research dissemination: The "Three Facts and a Story" randomized-controlled trial', *Journal of Hepatology,* 75(2), pp.271-274.

Trychin, S. (1986). *Relaxation training for hard of hearing people: Trainee's manual*. Gallaudet University.

Vauth, R., Kleim, B., Wirtz, M., and Corrigan, P. W. (2007) 'Self-efficacy and empowerment as outcomes of self-stigmatizing and coping in schizophrenia ', *Psychiatry research,* 150(1), pp. 71-80.

Wallhagen, M.I., (2010) 'The stigma of hearing loss', *The gerontologist*, 50(1), pp.66-7

Wayner, D. S., and Abrahamson, J. E. (1998) '*Learning to hear again: An audiologic rehabilitation curriculum guide*', Hear Again.

World Health Organization. (2017). *Global costs of unaddressed hearing loss and cost-effectiveness of interventions: a WHO report, (2017)*. World Health Organization.

Zanna, M.P. ed., (1999). *Advances in experimental social psychology*. Elsevier.

Zhang, L., Li, H., Lee, W. J., and Liao, H. (2021) 'COVID-19 and energy: Influence mechanisms and research methodologies', *Sustainable Production and Consumption*, 27, pp. 2134-2152.